Commodity Year Book 1981

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The wide price movements and active markets which characterized futures trading in 1980 are expected to continue in 1981 as crop developments, economic unsettlement, and political unrest in many areas of the world affect the production, movement or distribution, and prices of commodities. Interest rate and currency futures appear slated to be in the vanguard of trading activity. While 1980 total volume in all futures contracts increased to a record level, 21 percent above the 1979 level, volume in the financial instruments futures group increased by 162 percent. The feature studies in COMMODITY YEAR BOOK 1981 are intended to help the reader recognize and take advantage of unfolding trading opportunities in these and some other futures markets.

Currency futures trading has expanded significantly, stimulated by international economic and political developments, influenced considerably by events in the Middle East affecting the supply and price of crude petroleum. In a timely study entitled, "Practical Tools for Trading Currency Futures," Robert Boston defines the major forces that determine rates of foreign exchange, including the key role played by interest rate differentials. He presents a systematic approach for the analysis of major components of the trade account segment of a nation's current account. Mr. Boston is a foreign exchange specialist with Thomson McKinnon Securities Inc.

Trading activity in interest rate futures has burgeoned as the emphasis of Federal Reserve Board efforts to curb accelerating rates of inflation shifted in the direction of curbing the rate of money supply growth by making credit more costly. In a unique approach to the subject of trading interest rate futures, "Trading Interest Rates Futures Time Curves," co-authors Jacob Grossman and Stanley R. Jonas explain some trading strategies for arbitraging expected future short term interest rates implied in T-bills, and in T-bond and gold futures spreads. Mr. Grossman and Mr. Jonas are Vice-Presidents for financial futures at ACLI International Commodity Services, Inc.

World events of the past two years have contributed to extreme price volatility for crude petroleum and its products. A result has been sharply increased trading activity in and widened industry acceptance of the heating oil futures contract which was established on the New York Mercantile Exchange in November 1978. In "Heating Oil Futures—An Expanding New Market," Jayne B. Ball discusses the key factors that influence heating oil supply and demand, cash-futures price relationships, and market participants. Jayne Ball is Senior Vice-President in charge of market development at the New York Mercantile Exchange.

Potatoes are a perishable commodity which must be consumed within one season. There is no carryover of stocks from one season to the next. Thus, each season for the key fall crop is an entirely new "ball game." In a comprehensive study entitled "A Trader's Guide to Analyzing the Potato Futures Market," Jack D. Schwager shows how to analyze the important production and stocks reports, and discusses cash-futures price relationships and potato spreads. Included in the article are a number of tables which should prove extremely helpful in the analysis of potato futures price prospects. Mr. Schwager, formerly Director of Commodity Research, Smith Barney, Harris Upham & Co., is now Senior Vice-President of Commodities Corp.

COMMODITY YEAR BOOK 1981 also includes expanded tables of monthly high, low, and closing prices for selected futures contracts in all major markets, along with monthly total volume and open interest tables for recent years. This feature should facilitate comparison of unfolding price, volume, and open interest data with those for recent years.

We again wish to express our appreciation for the assistance furnished us by governmental agencies, commodity exchanges, various trade associations, and other organizations. These institutions are listed on page 4.

The Editorial Board
May 1981

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International Silk Association
International Monetary Market (Chicago)
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Nuclear Regulatory Commission
Portland Cement Association
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Rubber Study Group
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Textile Organon
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United States Department of Commerce
United States Department of Energy
United States Department of Interior
United States Department of Labor
United States Bureau of Mines
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United States Treasury Department
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The general commodity price level, as measured by both the Commodity Research Bureau Futures Price Index and the Bureau of Labor Statistics Spot Commodity Index, rose to an all-time high in late 1980, and then trended lower throughout most of the first half of 1981.

The continuation of the 1979 uptrend into early 1980 was paced by the metals, which peaked at that time and were an important factor in the subsequent sharp decline which extended into the second quarter of the year. Major contributors to general price weakness at that time were soaring interest rates and strengthening of the U.S. dollar vis-a-vis most major foreign currencies. Federal Reserve Board attempts to slow the rate of inflation by making credit less readily available and more costly helped to push interest rates sharply upward. This development provided incentive for an increased flow of foreign capital to the United States to take advantage of the attractive rates of return on U.S. financial instruments. The purchase of dollars to acquire U.S. income-producing assets led to significant strength in the U.S. dollar against most major foreign currencies.

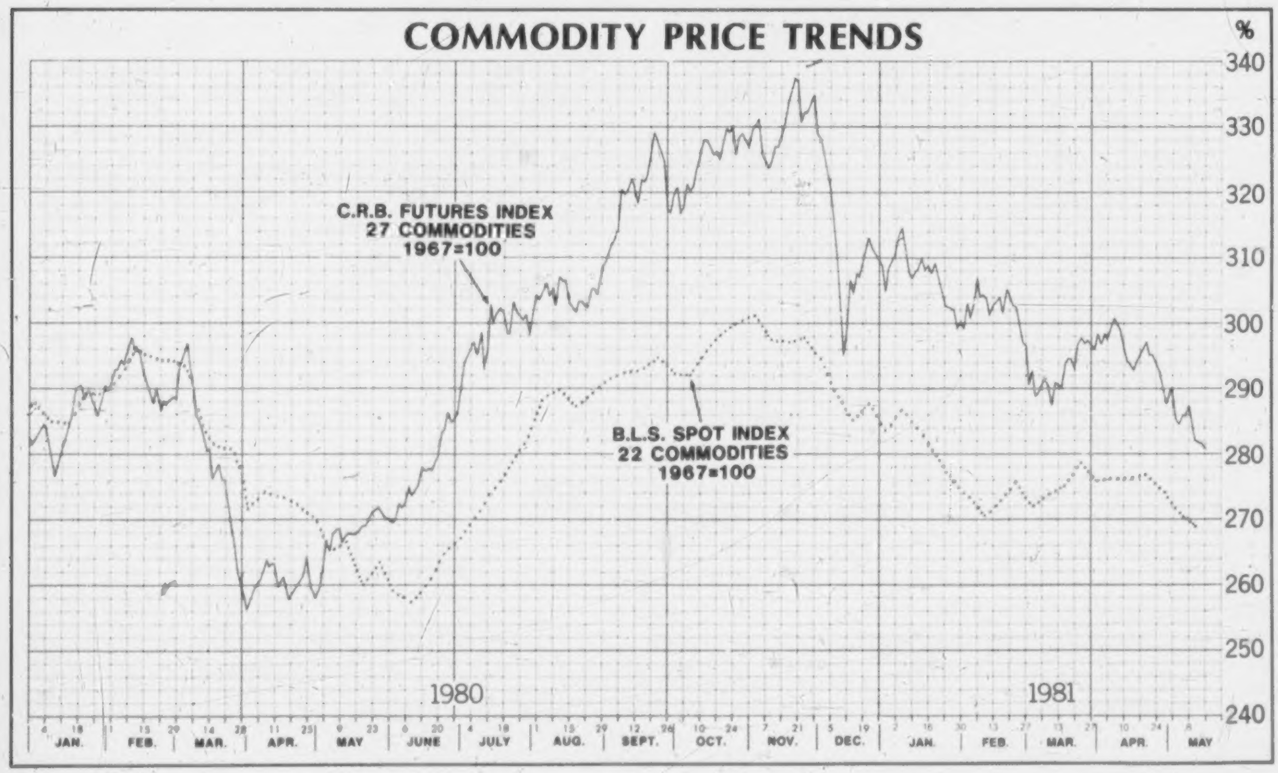
The increased U.S. interest rates raised the cost of financing the acquisition and carrying of commodity inventories at a time of considerable economic uncertainty and exerted a depressing influence on market sentiment. At the same time, the strong U.S. dollar adversely affected export demand for many U.S. commodities, by increasing the cost of buying U.S. commodities in terms of foreign currencies.

The renewed uptrend in the CRB Futures Price Index and the BLS Spot Commodity Index, which began around mid-1980 and culminated in an all-time high of 337.6 for the CRB Index on November 20, 1980, was paced by strength in the grain and oilseed sectors—quite the opposite of a year earlier, when precious metals sparked a rise to the then all-time high of 282.8. Corn led the advance, influenced by projections of a significant reduction in world supply of feedgrains and the expectation of heavy export demand for U.S. feedgrains, wheat, and oilseeds. Also, the Federal Reserve Board took steps to ease the credit crunch. The consequent, but temporary, decline in interest rates and weakening of the U.S. dollar in most foreign exchange markets contributed to renewed firmness in the general commodity price level.

Moreover, in mid-1980, prices of many U.S. agricultural commodities increased dramatically, though briefly, because of the summer drought in many crop growing regions. Also, throughout 1980, the overall outlook for commodity prices was influenced by increasing crude oil prices, which faltered only in early 1981.

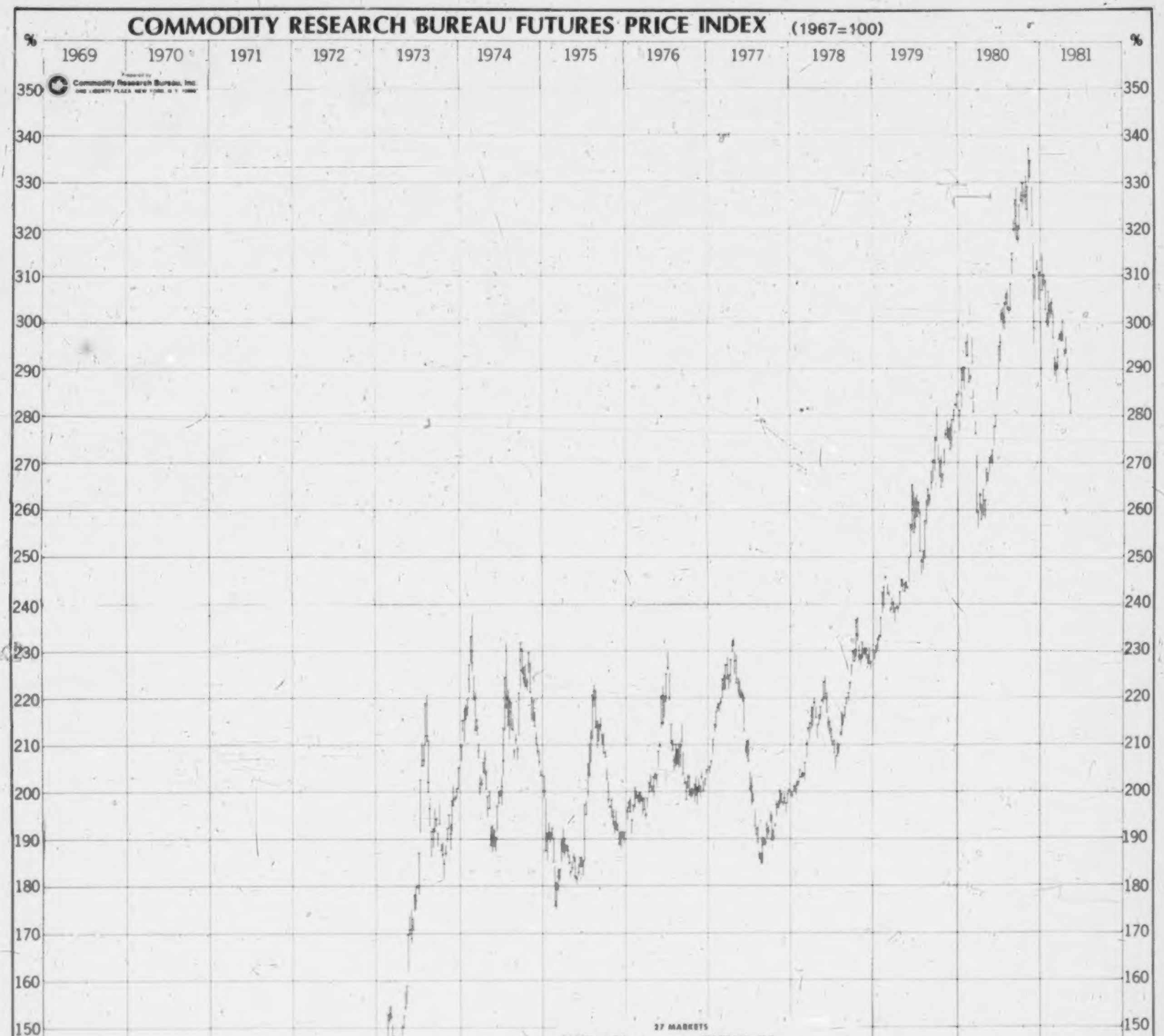
An abrupt shift in market psychology occurred in early December 1980, when prices virtually collapsed on the 11th of that month. The sharp break may have been due to a number of factors, but it was influenced considerably by the announcement of the Reagan administration's tough anti-inflation policies and soaring interest rates.

A subsequent price recovery was short-lived and prices trended lower into mid-May 1981, influenced to a considerable extent by renewed firmness in the U.S. dollar and resumed credit tightening by the



tional unsettling price factor was the projection of increased, and possibly record-large, world grain crops in 1981. The realization that lifting of the 16-month partial embargo against U.S. grain sales to the Soviet Union on April 24, 1981 could be of little near term significance to U.S. export demand also

as measured by the Producer Price Index, continued to decline throughout 1980 and well into the second quarter of 1981. In April 1981, the purchasing power of the dollar (1967 = 100) was 37.4 cents, down 11.3 percent from 41.7 cents in April 1980.



BY JACK D. SCHWAGER

Introduction

Trading in potato futures was initiated by the Chicago Mercantile Exchange (CME) in 1931. The CME contract, which specified delivery of Idaho russet potatoes, failed to attract substantial trading interest. Open interest averaged under 100 carlots[1] in most years, with the contract slipping to complete dormancy by the early 1960's. Trading was revived by the introduction of a revised contract in the late 1960's, and average open interest exceeded 1,000 carlots during the 1968–70 period. Thereafter, trading activity once again faded, with average open interest declining to under 100 carlots in recent years. Major contract revisions in the 1970's, which included the addition of other russet-producing states as sources of deliverable supply and F.O.B. delivery without right of reinspection at destination, failed to generate trading interest.

The primary potato futures contract is traded on the New York Mercantile Exchange. Trading began in 1941, but did not achieve sustained heavy volume until the early 1950's. The New York Mercantile contract specifies the delivery of round white potatoes.[2] It is somewhat ironic that trading in round white futures has succeeded while the russet contract has failed, since russets account for a much greater percentage of total U.S. potato production—approximately 70%, versus 25%. (Round reds account for the remainder.) There are several possible explanations for this apparent paradox:

1. Russets are used primarily for processing, while round whites are used almost exclusively for tablestock. This is significant because there is a much greater level of direct forward contracting in processed potatoes.
2. The marketing of russet potatoes is far more concentrated in large organizations.
3. It is difficult to choose a central delivery location for russets (similar to New York City for round whites).
4. Past russet contracts have been disadvantageous for buyers, due to the uncertainty of delivery points—a particularly strong drawback in view of the contracts' F.O.B. provisions.
5. There is a perceived quality difference between russet potatoes grown in different states.

In the future, the Chicago Mercantile Exchange will probably implement further revisions of the russet contract in an effort to increase trading activity. However, although a viable russet contract would serve a useful economic function,[3] history suggests that the potential success of such attempts is doubtful, at best. Therefore, this article will focus entirely on the New York Mercantile contract.

A Market Under Attack

During the 1970's, the New York potato futures market came under increasing attack. The criticism centered on two key events:

1. *The 1976 Default*—At the end of the last trading day of the May 1976 futures position, an unusually large 1,911 contracts still remained open, compared to the approximate 50–200 usually settled by delivery. This was particularly surprising, since deliverable supplies were relatively tight during the tail end of the 1975/76 season, due to a small Maine crop and abnormally large export business. It soon became evident that a major portion of the short position was held by two large western potato producers who did not own the deliverable supplies (U.S. #1 Maine potatoes). The shorts delivered 248 carlots against their open positions, settled 663 contracts by EFP's,[4] and defaulted on the remaining 1,000 contracts.
2. *The 1979 Termination of Trading*—In 1979, 49 out of 57 deliveries against the expired March contract failed to meet grade specifications upon reinspection in New York, after having passed a similar inspection while loading in Maine.[5] This situation prompted serious concern over the potential for major delivery problems in the April and May contracts. Meeting in an emergency session, the Board of Governors decided to cease trading in the April and May 1979 positions.

   The unprecedented action of an exchange abruptly terminating trading of its own contracts triggered a storm of controversy. Some critics argued that since the April and May contracts permitted delivery of commercial potatoes (a lower grade) at a discount, delivery problems would not have been as serious as in March, even allowing for reduced supplies and a deterioration in quality due to the passage of time. Others questioned the accuracy of the New York reinspections. (Potato inspections are conducted by a department of the USDA and are not under the control of the New York Mercantile Exchange.) Whether the Board of Governors' action, which eliminated the possibility of a serious contract failure in April or May, was worse than the problem remains a entirely unfounded. (Most of the members were floor traders who were effectively voting to eliminate their primary source of income.) Furthermore, no evidence has ever emerged indicating that any board member held a market position which would have benefited by the vote.

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[1] A contract equals one carlot (the size has changed over the years).

[2] Originally Maine origin only. N.Y.-Upstate, N.Y.-Long Island, and Connecticut were added as deliverable areas effective with the March 1981 contract.

[3] Due to the wide price variation between round white and russet potatoes, the New York Mercantile contract is an imperfect hedging vehicle for western potato growers and commercial users.

[4] Exchange of Futures for Product.

[5] The New York Mercantile contract specifies reinspection at delivery point.

Over the years, a number of bills to ban trading in potato futures have been introduced in various committees of the House of Representatives and the Senate. The publicity related to these legislative proposals also served to damage the image of the potato futures market. In addition to citing the above two events, these bills claimed that futures failed to converge with cash at expiration, and that price movement in futures was the result of speculative manipulation, rather than changes in fundamentals.

Recurrent negative publicity has prompted some traders to avoid the potato futures market. Whether the New York Mercantile futures contract represents a viable market is an essential question which must be considered before turning to a discussion of the fundamental analysis of this market.

The Viability of Potato Futures

Trading activity is a good indicator of a market's viability. Futures contracts which do not serve an economic purpose, are poorly designed, or lack significant trade participation do not have to be legislated out of existence; they die of a lack of interest. Trading activity in potato futures has rebounded vigorously this past season. At this writing (January 1981) open interest has been averaging approximately 40% above the past five-year average. Average daily trading volume levels are the highest in recent times, with the exception of the 1973/74 season.

Why has the potato market been able to retain its trading popularity despite the criticism detailed in the previous section? There are a number of key reasons:

New York Mercantile Exchange Actions

The Exchange initiated a number of key measures in response to the 1976 default and the delivery problems in 1979:

1. The Exchange sharply increased the economic penalties for failure to meet delivery obligations. According to the new regulations, a seller who fails to meet delivery requirements by last notice day is fined a "delinquency" charge of $200, plus 10% of the contract's value (basis settlement price) per day, up to a maximum of five days. At that point, the seller is in "default" and is charged an additional penalty equal to a minimum of 20% of contract value. Thus, assuming a price of $10/cwt., the minimum penalty for default would be $4,500, or 90% of the contract value. Quite clearly, these new rules provide extremely strong incentive for sellers to avoid default.
2. Keeping in step with the changing standard mode of transportation in the cash market, the rail delivery specification was broadened to include truck delivery effective with the May 1977 contract.
3. The revised round white futures contract included potatoes as deliverable states. (Previously, only Maine potatoes were deliverable.) The extent to which this move expanded deliverable supply will be considered in a later section.
4. The revised round white futures contract changed the delivery procedure to allow the seller the option of a second delivery at stricter grade specifications, with a passing inspection required only at the point of origin. This measure represented a most significant change, since it assured sellers that they could meet contract obligations if they were sure of their ability to deliver a sufficiently high quality shipment at a local point. In 1979, "shorts" were frustrated by the failure of their deliveries to pass reinspection in New York after passing inspection in Maine. If the second delivery option had existed in 1979, it is quite possible that the crises surrounding the March delivery and the Exchange's suspension of trading could have been avoided.

Underlying Validity of Contract

The economic relevance of the potato futures contract is demonstrated by the following factors:

1. Major price fluctuations tend to directly correspond to shifts in fundamentals. The fundamental model discussed later in this article explains most of the season-to-season price variation in futures.
2. With few exceptions, futures and cash prices tend to converge at expiration.[6]
3. The potato futures contract enjoys substantial trade participation.

Accessibility to the Small Speculator

Sharp increases in volatility during the 1970's have placed many futures markets out of the reach of the small speculator. In many markets, daily equity swings of $1,000-$2,000 per contract have become almost commonplace. Although potato prices are relatively volatile, the contract size is considerably smaller than those of most other markets. Even at a relatively high price of $15/cwt., the total value of a single potato futures contract would only be $7,500. The following are comparison figures for other commodities (the price levels upon which these computations are based are indicated in parentheses): wheat —$25,000 ($5/bushel); soybeans—$45,000 ($9/bushel); live cattle—$28,000 ($70/cwt.); sugar—$33,600 (30¢/lb.); gold—$60,000 ($600/oz.); silver —$75,000 ($15/oz.). Perhaps now more than ever, the relatively small size of the potato futures contract strongly contributes to its continuing popularity among speculators.

It should be stressed that speculative participation is a desirable feature in a futures market, since it potatoes—a market in which hedge participation is primarily on the short side, and speculators are generally long. Thus, speculators help absorb commercial selling in the absence of significant long hedge participation.

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[6] Strictly speaking, the basis (the difference between cash and futures—after adjusting for freight) at expiration tends to be negative—a pattern which probably reflects a rejection risk in delivering against futures. This explanation appears plausible, since the premium for futures appears to be inversely correlated with the level of Maine stocks (the only source of deliverable potatoes prior to 1981). Producers should allow for this bias in the basis at expiration when implementing their hedges. (This point will be discussed later.)

Bull Market

To a significant extent, the sharp resurgence in trading volume during the 1980/81 season was due to the small crop and resulting uptrend in prices. Bull markets tend to generate greater speculative participation.

Intrinsic Fundamentals

Perishability

In contrast to most other agricultural commodities, there is no carryover in potatoes, which is a perishable crop that must be entirely consumed within one season. Thus, whereas for many commodities the projected ending carryover is a critical statistic, in potatoes there is "no such animal."

The perishability of potatoes is also important because it implies a sense of immediacy in price response to fundamentals. For example, if there is a surplus, there can be no doubt that prices will come under pressure before the end of the marketing season. In contrast, in the case of more storable commodities, a surplus in a given season conceivably may not exert its full impact until the following season if producers choose to store their crop and remain reserved sellers. Alternatively, expectations for a reduced crop in the coming season could mitigate the influence of a surplus during the current season. With potatoes these factors are not relevant, since producers have no choice but to market the entire crop during the season in which it is grown.

The Fall Crop Versus Total Production

Although potatoes are harvested in every season, in analyzing the price prospects for futures, it is sufficient to survey the outlook for the fall crop only. Reasons:

1. Fall production accounts for the bulk of total annual output—roughly 85%. Table 1 offers a

later use, crops harvested in other seasons are consumed shortly after harvest.

3. Futures are only traded for fall-crop potatoes.

The above does not mean to imply that other crops have no effect upon fall prices, but rather that the impact is minimal. For example, although the winter-crop harvest coincides with the fall marketing season, the total winter crop accounts for less than 1% of annual production. Thus, a huge increase or decrease in the winter crop would imply only a miniscule change in total production. Spring production might influence the prices of late-marketed fall potatoes, but this effect will primarily occur after the expiration of the last futures contract of the season.[7] The size of the summer crop is marginally more significant to futures, since the tail end of the summer potato crop can compete with the early fall harvest. Nevertheless, even here, the difference between a small and large summer crop is probably less important to fall prices than a 1% change in the fall crop.

In view of the above considerations, very little if anything is lost by confining the analysis of potato fundamentals to fall crop statistics. Consequently, the remainder of this article will focus on fall crop data.

Production

Beginning in 1980, the USDA discontinued its fall crop planting intentions estimate. As a result, the July Crop Production report, which contains the initial acreage estimate for fall potatoes, provides the first official indication of potential fall potato production.

The initial acreage-for-harvest estimate has a very impressive history of accuracy when compared with the final USDA estimate. As indicated in Table 2, in 14 of the past 15 seasons, the deviation between the initial acreage estimate and final figure was 1% or less—an extremely narrow difference. It should also be noted that there appears to be a definite

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[7] The last trading day of the April contract is the last business day in March. (Under the revised contract, April is the latest traded delivery month. Approval to trade a May futures contract has been temporarily withheld by the CFTC.)

TABLE 1
U.S. Potato Production By Season (million cwt.)

Season	Winter	As % of Total	Spring	As % of Total	Summer	As % of Total	Fall	As % of Total	Total
1970	3.6	1.1	25.9	8.0	28.4	8.7	267.8	82.2	325.7
1971	3.1	1.0	23.7	7.4	25.9	8.1	266.7	83.5	319.3
1972	2.3	0.8	21.0	7.1	23.7	8.0	249.3	84.1	296.4
1973	2.9	1.0	21.3	7.1	21.5	7.2	254.4	84.8	300.0
1974	2.9	0.8	25.0	7.3	25.1	7.3	289.3	84.5	342.4
1975	2.9	0.9	20.0	6.2	21.0	6.5	278.4	86.4	322.3
1976	3.0	0.8	24.7	6.9	22.5	6.3	307.4	85.9	357.7
1977	2.7	0.8	22.9	6.5	22.0	6.2	307.1	86.6	354.6
1978	2.6	0.7	18.0	4.9	21.2	5.8	323.5	88.6	365.2
1979	2.4	0.7	21.3	6.2	22.3	6.5	296.9	86.6	343.0
1980[1]	2.4	0.1	17.1	5.7	17.0	5.6	264.6	87.9	301.0

[1] Preliminary.

15 years. For the entire period, the initial acreage estimate averaged approximately 0.6% above the final reported level. In summary, Table 2 suggests that the July estimate can be viewed as a very close approximation of actual acreage, and that any revisions are more likely to be on the downside.

Since potato yields vary greatly by region, the state-by-state acreage breakdown is important in projecting production. For example, during 1975–1979, the average yield for Washington was 462 cwt./acre, nearly three times the 159 cwt./acre average yield of North Dakota. Table 3 illustrates

1980 Crop Production report and lists the acreage-for-harvest estimates and previous three-year and five-year average yields for all fall potato-growing states. An expected production figure is derived for each state by multiplying the acreage estimate by the three-year average yield. In similar fashion, state production estimates are also derived using the five-year average yield. These columns are then totaled to obtain a total production forecast. (The USDA in its December 1980 report estimated the 1979/80 fall crop at 264.6 million cwt.)

TABLE 2

Fall Potato Acreage for Harvest Estimate: Initial vs. Actual* (1,000 Acres)

	Total Fall			Maine		
Crop Year	Initial Estimate	Final Estimate	Initial as % of Final	Initial Estimate	Final Estimate	Initial as % of Final
1965	1,068	1,060	100.8	148	148	100.0
1966	1,112	1,119	99.4	154	158	97.5
1967	1,138	1,136	100.2	163	158	103.2
1968	1,089	1,078	101.0	155	155	100.0
1969	1,116	1,116	100.0	157	156	100.6
1970	1,150	1,138	101.0	156	150	104.0
1971	1,123	1,120	100.3	145	145	100.0
1972	1,038	1,012	102.6	135	128	105.5
1973	1,072	1,067	100.6	137	137	100.0
1974	1,143	1,140	100.3	142	140	101.4
1975	1,047	1,047	100.0	121	122	99.2
1976	1,151	1,143	100.7	121	112	108.0
1977	1,150	1,139	101.0	124	118	105.1
1978	1,148	1,155	99.4	120	118	101.7
1979	1,083	1,074	100.8	115	115	100.0

* Report currently released in July; released in August prior to 1979. All figures include late summer, N.Y.-L.I., Wisconsin, and Washington.

The October Crop Production report contains the first USDA production estimate for the fall crop. The October projection is revised in the December report, which contains the last production estimate released while futures for a given season are still trading.[8] Table 4 illustrates that the October forecast is not subject to major revisions. During the past ten years, the widest deviation between the October and December estimates was 6.7 million cwt. (2%), while the average difference between the two figures was only 2.5 million cwt. Deviations between the October and final revised estimates were slightly wider, but the largest difference in recent years was still under 4% (11.5 million cwt. in 1978).

There appears to be a tendency for the October report to underestimate production. In eight of the last ten years, the October forecast was lower than the December and final revised estimates. Even in those years where the October estimate proved too high, subsequent revisions were miniscule—1% or less.

Distribution of Production—The Key to Deliverable Supply

The price of potato futures is dependent not only upon the total fall potato supply, but also the distribution of production. In past seasons, only round white Maine potatoes were deliverable against the New York Mercantile futures contract. Effective with the March and April 1981 contracts, the deliverable base was expanded to also include round white potatoes from N.Y.-Upstate, N.Y.-Long Island, and Connecticut.

Table 5 derives deliverable supply estimates for recent seasons. Round white potatoes account for only about two-thirds of Maine potato acreage—the remaining potatoes are russets which are not deliverable against the futures contract. Column 3 of Table 5 shows the past Maine production levels adjusted for this factor.[9]

Although virtually the entire N.Y.-Upstate, N.Y.-Long Island, and Connecticut crops consist of round white potatoes, the expansion in the deliverable supply base is considerably less than suggested by the production levels in these areas. The reason for this is that the percentage of the crop remaining in storage in these states as of April 1 is much smaller than the corresponding figure for Maine. (We focus on April 1 since deliverable supply is only a critical consideration during the latter part of the season—although expectations for this period will affect the price of April futures during preceding months.)

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[8] Prior to 1980, a November estimate was also released.

[9] Of course, the actual deliverable supply base would be smaller than indicated by these figures, since not all round white Maine potatoes meet delivery grade specifications. However, further refinement of the figures to include this factor is not possible, since statistics indicating the grade breakdown of past production levels are unavailable.

Production Implications of July 1980 Acreage Estimate

	July Acreage for Harvest Estimate (1,000 acres)	3-Year Average Yield (cwt./acre)	Indicated Production Assuming 3-Year Yields (1,000 cwt.)	5-Year Average Yield cwt./acre)	Indicated Production Assuming 5-Year Yields (1,000 cwt.)
California	17.4	357	6,212	351	6,107
Colorado	35.0	275	9,625	269	9,415
Connecticut	1.8	232	418	237	427
Idaho—10 SW Co.	23.0	322	7,406	321	7,383
Other Co.	277.0	257	71,189	247	68,419
Indiana	3.4	245	833	246	836
Maine	107.0	237	25,359	235	25,145
Massachusetts	3.4	228	775	222	755
Michigan	31.5	258	8,127	250	7,875
Minnesota	62.0	193	11,966	183	11,346
Montana	7.1	240	1,704	233	1,654
Nebraska	6.5	250	1,625	251	1,632
Nevada	13.0	330	4,290	340	4,420
New York—Long Island	18.7	292	5,460	289	5,404
Upstate	24.0	265	6,360	259	6,216
No. Dakota	107.0	165	17,655	159	17,013
Ohio	9.7	233	2,260	235	2,280
Oregon—Malheur Co.	10.0	358	3,580	359	3,590
Other Co.	37.0	428	15,836	440	16,280
Pennsylvania	22.0	250	5,500	248	5,456
Rhode Island	3.8	233	885	237	901
So. Dakota	7.1	178	1,264	143	1,015
Utah	4.9	245	1,201	247	1,210
Vermont	0.6	222	133	221	133
Washington	89.0	467	41,563	462	41,118
Wisconsin	50.0	318	15,900	309	15,450
Wyoming	5.5	218	1,199	233	1,282
	977.4		268,325		262,762

In recent years, the percentage of the Maine crop still in storage as of April 1 has averaged approximately 34%, compared with 12% for N.Y.-Upstate, and a mere 3.5% for N.Y.-Long Island. (April stocks in Connecticut are sufficiently minimal as to be ignored.) Thus, in terms of the amount of potatoes available for delivery late in the season, N.Y.-Upstate and N.Y.-Long Island production levels are obviously considerably less important than the Maine crop. To adjust for this difference one can multiply the N.Y.-Upstate production level by .35 (12%/34% = .35) and the N.Y.-Long Island crop by .10 (3.5%/34% = .10).[10] Table 5 indicates that the expansion in the deliverable supply base due to the states added in the revised contract is far more moderate than might be assumed on the basis of production levels.

TABLE 4

Fall Potato Crop Estimates vs. Actual Crop* (million cwt.)

Crop Year	October Estimate	December Estimate	Oct. Est. vs. Dec. Est.	Final Revised Estimate	Oct. Est. vs. Final Est.
1970*	248.7	251.8	−3.1	252.8	− 4.1
1971*	249.3	249.9	−0.6	253.8	− 4.5
1972*	236.0	234.1	+1.9	234.1	+ 1.9
1973	252.7	252.0	+0.7	253.9	− 1.2
1974	286.6	287.7	−1.1	288.7	− 2.1
1975	266.6	271.9	−5.3	276.1	− 9.5
1976	299.8	302.8	−3.0	307.4	− 7.6
1977	303.6	304.4	−1.2	307.1	− 3.5
1978	312.0	318.7	−6.7	323.5	−11.5
1979	300.3	301.6	−1.3	296.9	+ 3.4
1980	260.7	264.6	−3.9		

* Figures do not include summer N.Y.-L.I., Wisconsin, and Washington.

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[10] The reader may well wonder why we do not simply use April 1 stock levels as an indicator of deliverable supplies. The reason for this is that April 1 stock levels are dependent upon the usage pace for a given season—a factor open to significant uncertainty until April is approached. Consequently, an adjusted production level would appear to be a preferable statistical input (to April stocks) in explaining price behavior prior to the expiration of the last futures contract of the season. (The last trading day for April futures is the last business day in March.)

Estimated Deliverable Supply (1,000 cwt.)

Season	(1) Maine Production	(2) Percent of Acreage Planted to Round Whites	(3) Estimated Maine Production of Round Whites[1] (Col (1) × Col (2))	(4) (.35) N.Y.-Upstate + (.10) N.Y.-L.I. Production[2]	(5) Estimated Deliverable Supply (Col (3) + Col (4))
1971/72	37,700	72	27,144	—	27,144
1972/73	33,280	72	23,962	—	23,962
1973/74	28,770	72	20,714	—	20,714
1974/75	36,400	72	26,208	—	26,208
1975/76	26,840	80	21,472	—	21,472
1976/77	27,440	79	21,678	—	21,678
1977/78	28,320	79	22,373	—	22,373
1978/79	25,960	77	19,989	—	19,989
1979/80	27,685	68	18,825	—	18,825
1980/81[3]	24,960	66	16,473	2,530	19,003

[1] Statistics on the breakdown of production between Russets and Round Whites are unavailable. This method of estimating Round White production implicitly assumes equivalent yields in the two varieties (a breakdown of yield statistics is also unavailable).

[2] The multipliers are based on the percentage of the crop remaining in storage as of April 1 in N.Y.-Upstate and N.Y.-L.I. compared to the corresponding percentage in Maine. For example, in N.Y.-Upstate April 1 stocks average approximately 12% of production, while in Maine they average 34%. Thus, 12/34 = .35. In N.Y.-L.I. about 3½% of the crop is still in storage as of April 1 (3.5/34.0 = .10).

[3] December 1980 Crop Production report.

Another means of appraising the relative tightness of deliverable supply is to examine the regional breakdown. Production in states designated as sources of deliverable supply and in nearby states has a more significant impact on futures prices than output from more distant areas (on an equivalent poundage basis). Therefore, production in the Eastern states and secondarily Central states is more important to the futures market than production in the Western states. Table 6 offers a regional breakdown of production for the past ten years. During this period, there has been a dramatic shift in production from the East to the West. This trend helps explain the prevalence of tight deliverable supply situations for New York futures in recent years, despite many abundant crops nationwide.

TABLE 6
Fall Potato Production[1] (1,000 cwt.)

Crop Year	Total Production[1]	Eight Eastern	Eight Eastern as % of Total	Eight Central	Eight Central as % of Total	Nine Western[1]	Nine Western as % of Total
1971	266,686	64,229	24.0	62,477	23.4	139,980	52.5
1972	248,841	51,431	20.7	55,029	22.1	142,381	57.2
1973	253,866	49,327	19.4	56,115	22.1	148,424	58.5
1974	288,674	60,274	20.9	65,359	22.6	163,041	56.5
1975	276,055	48,394	17.5	54,097	19.6	173,564	62.9
1976	307,427	50,734	16.5	57,718	18.8	198,975	64.8
1977	307,064	49,836	16.2	67,772	22.1	189,456	61.7
1978	323,498	47,292	14.6	69,276	21.4	206,930	64.0
1979	296,938	48,789	16.4	62,326	21.0	185,823	62.6
1980[2]	264,594	41,817	15.8	54,625	20.6	168,152	63.6

[1] All years include late summer N.Y.-L.I., Wisconsin and Washington. Nevada production not included for 1969–1973; Nevada production relatively minor in those years.

[2] December 1980 Crop Production report.

Source: U.S.D.A.

Prior to the 1975/76 season, exports during the October–May period (the basic marketing season for fall-crop potatoes) were equal to only about 1%–2% of the total fall crop. (All export figures in this article refer to the total of both fresh and processed exports in terms of fresh equivalent). Exports exploded during the 1975/76 and 1976/77 seasons, as back-to-back disastrous European crops opened a major new market for U.S. potatoes. In subsequent seasons, exports receded to substantially lower levels as European production returned to normal, although some gains in the processed potato export market were maintained.

Roughly speaking, historical experience suggests that traders can assume that exports will approximate recent-year levels if there are no major problems with the European crop. However, if forecasts by the Foreign Agricultural Service of the USDA indicate a sharp reduction in European production, traders should allow for a higher export level, as occurred in the 1975/76 and 1976/77 seasons. The extent to which exports will exceed the normal level will depend upon the magnitude of the foreign production shortfall and on the availability of U.S. supplies.

velopment which will result in sharply higher prices, exports may not substantially exceed average levels, even if European production is sharply reduced.

Table 7 summarizes the net export balance for potatoes in recent seasons. The data is compiled on an October–May basis to coincide with the primary fall crop marketing period. Column 3 indicates total net fresh exports (exports minus imports). Columns 4, 5, and 6 are derived by multiplying the reported export figures by the appropriate conversion factors (the number of pounds of fresh potatoes required to manufacture one pound of the specified processed potato product). The conversion factors suggested by the USDA are as follows: flakes and granules—7.1; other dehydrated potatoes—8.0; and frozen potatoes—2.5. Column 7 indicates the total net processed export figure (in fresh equivalent), which when added to Column 3 yields a total net export figure.

Traders should also note that U.S. export statistics are reported in metric tons. These figures must first be converted to million cwt. if they are to be comparable to other key potato statistics (e.g. production, etc.). (To convert metric tons into million cwt., multiply by .000022.)

TABLE 7
Potatoes: Net Export Balance[1] (All figures million cwt.)

Crop Year	(1) Fresh Potato Exports	(2) Fresh Potato Imports	(3) Total Net Fresh Exports (Col. (1) – Col. (2))	(4) Exports of Flakes & Granules[2]	(5) Exports of Other Dehydrated Potatoes[2]	(6) Frozen Potato Exports[2,3]	(7) Total Net Processed Exports (Col. (4) + Col. (5) + Col. (6))[2,4]	(8) Total Net Exports (Col. (3) + Col. (7))[2]
1971/72	1.03	1.07	–.04	.58	.20	.20	.98	.94
1972/73	1.81	.74	1.07	.75	.23	.30	1.28	2.35
1973/74	2.54	1.82	.72	1.34	.52	.75	2.61	3.33
1974/75	1.61	1.28	.33	.78	.23	.50	1.51	1.84
1975/76	6.47	.62	5.85	5.69	1.65	1.00	8.34	14.19
1976/77	7.43	.80	6.63	9.87	3.81	1.50	15.18	21.81
1977/78	1.59	.86	.73	2.80	1.38	.65	4.83	5.56
1978/79	1.16	.61	.55	3.74	1.46	1.05	6.25	6.80
1979/80	0.99	1.04	–.05	5.17	.53	1.25	6.95	6.90

[1] October–May only; this period is used to coincide with fall crop marketing period. Simplifying assumption: October–May exports include only fall potatoes. (Although most processed exports subsequent to May also involve fall potatoes, this table only focuses on the October–May marketing period.)

[2] Stated in fresh equivalent.

[3] Actual frozen exports not reported prior to January 1978; only total frozen vegetable statistics available for previous years. Thus, figures listed for 1977/78 and earlier seasons represent only the very roughest guess, and should not be assumed as precisely accurate.

[4] Excludes processed imports which are miniscule.

Cold Storage Reports

The monthly USDA Cold Storage report indicates total frozen potato stocks. Separate figures are reported for frozen french fries and other frozen potatoes, with the former accounting for approximately 85% of the total.[11] There is a strong trend for frozen potato stocks to steadily build in the months following the fall crop harvest, reaching a peak around June and then shrinking through September until the following fall crop becomes available.

Many potato traders tend to exaggerate the importance of these reports. The significance of Cold Storage reports to the potato market is limited for two key reasons:

1. Frozen potato stocks are equal to only about 5%–6% of total annual U.S. potato production (in fresh equivalent). Thus, even a substantial change in frozen stocks may imply only a modest shift in the overall supply picture.
2. The Cold Storage reports indicate only absolute stock levels, not the amount of potatoes which has moved into and out of storage. Without the latter statistics, it is difficult, if not impossible,

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[11] Cold storage statistics are reported in terms of thousand pounds, in contrast to the thousand cwt. used for production figures. (To obtain the fresh potato equivalent in thousand cwt., divide the reported cold storage figure by 100 and multiply the result by 2.5—the approximate number of pounds of fresh potatoes required to produce one pound of frozen french fries.)

to meaningfully interpret cold storage figures. For example, a higher-than-anticipated frozen potato stock figure might reflect increased processing, which results in the movement of potatoes into cold storage, rather than decreased consumption. In such an event, the higher stock figure would actually reflect bullish rather than bearish conditions.

Empirical evidence suggests that the market tends to interpret the Cold Storage report in a superficial fashion: an above-average stock increase (decrease) or below-average decrease (increase) for a given month is bearish (bullish). However, it should be stressed that this interpretation is relevant only in terms of the report's price impact during the immediately following trading session; the longer-term price impact is usually minimal.

Demand Versus Consumption

One of the most common errors in commodity fundamental analysis is the confusion between the terms "demand" and "consumption." These two terms represent very different concepts, and their frequent interchangeable use leads to many major analytical pitfalls. Consumption, as its name implies, is quite simply the amount of a given commodity that is consumed during a specified period. Demand, on the other hand, can be defined as a schedule of the various quantities of a commodity which will be consumed at each price level. In a sense, demand is a barometer of consumer buying pressure. An increase in demand (i.e., a shift from one demand schedule to another) means that more will be consumed at each given price level.

Factors which might affect the demand schedule include: disposable income, consumer tastes, and the price of substitute goods, but by definition not price. For example, a massive advertising program which convincingly extolls the nutritional value of potatoes would cause a shift to increased demand—i.e. at each given price, more would be consumed than before. In contrast, a price decline would lead to increased consumption, but it does not imply a change in demand. In other words, all else being equal, there will be no change in the amount consumed at each given price level unless there is a shift in demand.

The key point is that consumption (the amount consumed) is directly dependent upon price, while price is determined by the interaction of supply and demand. In other words, consumption is a consequence, not a determinant, of price. Thus, the concept that consumption mirrors demand is totally erroneous; consumption is determined by both supply and demand. In fact, total-season potato consumption reflects supply, not demand. Reason: since potatoes are perishable, they will be entirely consumed in the season in which they are produced, with price acting as a rationing factor. Consequently, for the potato market, consumption projections for the season as a whole are totally meaningless (although certainly not uncommon).

Perhaps the primary reason why consumption is incorrectly used as a proxy for demand is that demand is not readily quantifiable. For markets in which demand is highly volatile (e.g. precious metals), this fact presents a major obstacle in using fundamental analysis. Fortunately, potato demand tends to be relatively stable, and price variations (from season to season) are primarily dependent upon fluctuations in supply. Occasionally, there may be a meaningful shift in demand. For example, statistical evidence seems to suggest that potato demand shifted downward during the 1979/80 season, possibly in response to reduced fast-food consumption, due to the gas shortage. Such changes, however, are difficult to project and even more difficult to quantify. Generally speaking, a reasonable price forecast can be obtained by using only supply statistics. If there is a reason to expect any significant shift in demand, price forecasts can be adjusted accordingly.

The Potato Stocks Report

Although, as explained in the previous section, total-season consumption is a meaningless statistic, the usage pace during the season can be critically important in influencing the price trend in futures. For example, if early season consumption tends to be

TABLE 8

Total Fall Potato Stocks Excluding Non-Reported States[1] (1,000 cwt.)

Season	Production[2]	Stocks on Dec. 1	As a % of Total Prod.	Stocks on Jan. 1	As a % of Total Prod.	Stocks on Feb. 1	As a % of Total Prod.	Stocks on Mar. 1	As a % of Total Prod.	Stocks on Apr. 1	As a % of Total Prod.
1970/71	260,185	171,710	66.0	147,640	56.7	120,720	46.4	95,850	36.8	N/A	N/A
1971/72	258,823	172,710	66.7	148,725	57.5	122,425	47.3	97,214	37.6	N/A	N/A
1972/73	242,723	155,355	64.0	132,000	54.4	105,163	43.3	82,585	34.0	57,885	23.8
1973/74	247,941	154,975	62.5	131,630	53.1	105,375	42.5	80,475	32.5	55,470	22.4
1974/75	278,956	184,000	66.0	160,210	57.4	131,510	47.1	102,978	36.9	75,227	27.0
1975/76	266,619	181,840	68.2	156,315	58.2	129,730	48.7	102,865	38.6	70,980	26.6
1976/77	294,802	198,605	67.4	172,190	58.4	141,340	47.9	112,830	38.3	81,130	27.5
1977/78	294,692	202,505	68.7	175,350	59.5	146,865	49.8	119,850	40.7	88,670	30.1
1978/79	310,936	219,650	70.6	193,320	62.2	162,880	52.4	132,270	42.5	99,250	31.9
1979/80	285,060	200,820	70.4	176,020	61.7	147,910	51.9	121,720	42.7	92,550	32.5
1980/81	253,883	169,700	66.8	143,960	56.7	118,465	46.7	94,230	37.1	68,340	26.9

[1] Nevada, Connecticut, Indiana, Massachusetts, Rhode Island, South Dakota, Utah, Vermont, and Wyoming (Nevada stocks not reported during entire period; other states discontinued beginning with 1980/81 season).

[2] Includes late summer crop of Washington, Wisconsin, and N.Y.-L.I. for all seasons. (Late summer production in these areas not officially defined as "fall crop" until 1971.)

surprisingly poor, supplies during the latter part of the marketing season will be heavier than previously anticipated, and prices will tend to decline (all else being equal). (The total consumption level for the entire season, however, will be the same, regardless of the usage pace.) Although the Potato Stocks reports are direct indicators of supply, their true significance lies in their reflection of the usage pace.

The Potato Stocks report is released monthly during the December–May period. The December report is the most critical, since approximately one-third of total-season disappearance occurs prior to December 1. (The December report also contains the revised production estimate.) The April and May Potato Stocks reports are currently irrelevant to futures, since they are released after the expiration of the final futures contract.

The Potato Stocks report does not survey all fall production states. Originally, only Nevada was excluded, due to disclosure problems. However, beginning with the December 1980 report, eight additional states were excluded from the stock survey: Connecticut, Indiana, Massachusetts, Rhode Island, South Dakota, Utah, Vermont, and Wyoming. For this reason, potato stocks 1980/81 forward are not directly comparable to previous season levels. To compensate for this factor, it is necessary to subtract total stocks in the eight deleted states from the reported levels of past seasons. The stock statistics in Table 8 have been adjusted in this manner.

The price implications of a given stock figure are directly related to the implied disappearance level. Disappearance is defined as the difference between production and stocks for the December report and the difference between the previous month's stock level and reported stocks in subsequent reports. It is more meaningful to view disappearance as a percent of production, rather than in absolute terms. For example, in a season of sharply reduced production, low disappearance figures are virtually inevitable. In such a situation, a low disappearance figure could actually have bullish implications if the disappearance/production ratio is above average. However, we would note that there is a tendency for the disappearance/production ratio to be moderately higher in low-production years—a pattern which should be considered when forecasting and interpreting disappearance figures.

TABLE 9
Disappearance of Fall Potatoes Excluding Non-Reported States[1] (1,000 cwt.)

Season	Total Production[2]	Pre-Dec. Disap.	Pre-Dec. Disap. as % of Total Prod.	Dec. Disap.	Dec. Disap. as % of Total Prod.	Jan. Disap.	Jan. Disap. as % of Total Prod.	Feb. Disap.	Feb. Disap. as % of Total Prod.	March Disap.	March Disap. as % of Total Prod.
1970/71	260,185	88,475	34.0	24,070	9.3	26,920	10.3	24,870	9.6	N/A	N/A
1971/72	258,823	86,113	33.3	23,985	9.3	26,300	10.2	25,211	9.7	N/A	N/A
1972/73	242,723	87,368	36.0	23.355	9.6	26,837	11.1	22,578	9.3	24,700	10.2
1973/74	247,941	92,966	37.5	23,345	9.4	26,255	10.6	24,900	10.0	25,005	10.1
1974/75	278,956	94,956	34.0	23,790	8.5	28,700	10.3	28,532	10.2	27,751	9.9
1975/76	266,619	84,779	31.8	25,525	9.6	26,585	10.0	26,865	10.1	31,885	12.0
1976/77	294,802	96,197	32.6	26,415	9.0	30,850	10.5	28,510	9.7	31,700	10.8
1977/78	294,692	92,187	31.3	27,155	9.2	28,485	9.7	27,015	9.2	31,180	10.6
1978/79	310,936	91,286	29.4	26,330	8.5	30,440	9.8	30,610	9.8	33,020	10.6
1979/80	285,060	84,240	29.6	24,800	8.7	28,110	9.9	26,190	9.2	29,170	10.2
1980/81	253,883	84,183	33.2								

[1] Nevada, Connecticut, Indiana, Massachusetts, Rhode Island, South Dakota, Utah, Vermont, and Wyoming (Nevada stocks not reported during entire period; other states discontinued beginning with 1980/81 season).

[2] Includes late summer crop of Washington, Wisconsin, and N.Y.-L.I. for all seasons. (Late summer production in these areas not officially defined as "fall crop" until 1971.)

Disappearance statistics are summarized in Table 9. The production figures in this table exclude output from the nine states presently not surveyed in the Potato Stock reports in order to allow for accurate disappearance calculations. The reader should be aware that many analysts and traders fail to make these adjustments in their statistics. Thus, their disappearance figures will include actual disappearance for the 15 states surveyed in the Potato Stocks report, plus total production in the excluded nine states. Since this error is commonplace, it is important to ascertain the definition used by analysts issuing prerelease estimates. Otherwise, market expectations for a given Potato Stocks report can be totally misinterpreted.

Diversion Programs

Occasionally, in seasons of abundant supplies, the government may attempt to support prices by implementing a diversion program. The only recent season in which such a program was enacted on a significant scale was 1978/79, when total fall potato production exceeded the previous record crop by a wide margin. In that season, the USDA program effectively removed 12.0 million cwt. of potatoes from the market (mostly for use as livestock feed). An awareness of diversion programs is important to the potato trader for two reasons:

1. In seasons of extremely depressed prices, a one-season government effort to mitigate the surplus

should be considered as a possible "surprise" development which could alter the price outlook.

2. In developing a fundamental price-forecasting model, it is necessary to account for the influence of past diversion programs.

Inflation

In drawing comparisons with past seasons, it is critical to incorporate the influence of inflation. After all, the measure of potato prices—the dollar—is itself a variable. Thus, straightforward price comparisons with past seasons can be extremely misleading. For example, a price level of $10/cwt. today represents a far lower "real price" than a similar quote five years ago.

A simple method of adjusting for inflation is to divide prices by corresponding price indices (e.g. PPI, CPI, etc.). In Table 10 we illustrate this approach for April futures during the November–March period, using the Producer Price Index (PPI) as a price deflator. Note that the pattern of past prices is substantially different when viewed in inflation adjusted rather than nominal terms. Traders should always use inflation-adjusted figures when comparing current and past prices.

TABLE 10
April Potato Futures: November–March Average Price Adjusted for Inflation ($/cwt.)

Season	November–March Average Price of April Potatoes	November–March Average Producer Price Index (PPI)	Average Price Divided By PPI
1971/72	3.14	1.162	2.70
1972/73	6.24	1.250	5.00
1973/74	10.69	1.457	7.34
1974/75	3.58	1.714	2.09
1975/76	9.94	1.791	5.55
1976/77	7.72	1.886	4.11
1977/78	4.27	2.002	2.13
1978/79	6.09	2.216	2.25
1979/80	6.70	2.546	2.63

Price Forecasting Model

The primary fundamentals we have discussed thus far can be drawn together into a price forecasting model. The key factors we wish to include are: fall production, exports, diversion, deliverable supply, and inflation. (An implicit assumption is that demand is relatively stable from year to year.) The first three factors can be combined into a single variable, which we call the "apparent domestic free supply" (see Table 11). The word "apparent" refers to the fact that Table 11 lists the originally reported December production estimates, rather than the final revised estimates. Reason: statistical analysis suggests that the December production forecast offers a better explanation of past price behavior than the final revised estimate which is released after the end of the marketing season. In other words, it appears that the market's perception of supply is a more critical price determinant than actual supply. The apparent domestic free supply helps explain much of the year-to-year fluctuation in potato prices.

TABLE 11
Fall Potatoes: Apparent Domestic Free Supply[1] (million cwt.)

Season	(1) December Fall Production Estimate	(2) Total Net Exports (Fresh Equivalent)[2]	(3) Diversion	(4) Apparent Free Domestic Supply (Col. (1) — Col. (2) — Col. (3))
1971/72	262.8[3]	0.9	—	261.9
1972/73	247.3[3]	2.4	—	244.9
1973/74	252.0	3.3	—	248.7
1974/75	287.7	1.8	—	285.9
1975/76	271.9	14.2	—	257.7
1976/77	302.8	21.8	—	281.0
1977/78	304.4	5.6	—	298.8
1978/79	318.7	6.8	12.0	299.9
1979/80	301.6	6.9	—	294.7
1980/81	264.6[4]	7.0[5]	—	271.6

[1] Fall December production estimates minus exports and diversion.

[2] Table 7, Column (8).

[3] Original production estimate plus actual production of late summer crop in Washington, Wisconsin and N.Y.-L.I.—areas not classified as "fall" potatoes until 1973.

[4] December 1980 production estimate.

[5] Forecast.

Our basic forecasting model is of the form:

$$\frac{P}{PPI} = a + bS + cD \text{ where,}$$

$\frac{P}{PPI}$ = Average price (of a given futures contract during a specified period) divided by the corresponding Producer Price Index;

S = Total apparent domestic free supply (fall potato production minus exports and diversion);

D = Deliverable supply (as derived in Table 5);

and a, b, and c are coefficients derived through a statistical method known as regression analysis.

Basically, the above model states that "real" potato prices (prices adjusted for inflation) are dependent upon both total and deliverable supplies. As might be theoretically expected, the derived values for b and c are negative—i.e., larger total and deliverable supplies result in lower prices.

At this writing, the foregoing model offers a reasonable explanation for past price behavior and can be used to derive approximate price forecasts. However, it should be stressed that changes in the fundamental structure of the potato market can necessitate changes in the above model. For example, five years ago our model would have employed a different definition of deliverable supply and might not have included exports (which were then consistently equal to less than 2% of total fall production).

Using Futures to Hedge

Critics of potato futures trading have often claimed that the contract is useless to hedgers, because futures and cash fail to converge. Fortunately, statistics belie this accusation. In Table 12, we compare past cash and futures prices during the last five days of trading. Note that for the period surveyed, the difference between average cash and futures prices (during the last five days of trading) exceeded

TABLE 12
Futures vs. Cash Equivalent During Last Five Trading Days ($/cwt.)

Contract	Average Futures Close During Last 5 Trading Sessions	Maine F.O.B. During Corresponding Period	Freight	Maine F.O.B. Plus Freight	Futures vs. F.O.B. Plus Freight (Futures Premium (+); Discount (−))
1972 Nov	3.96	3.18	.98	4.16	− .20
1973 Mar	7.27	5.83	.98	6.81	+ .47
Apr	6.86	5.88	.98	6.86	.00
May	8.14	6.51	.98	7.49	+ .65
Nov	6.01	5.14	1.00	6.14	− .13
1974 Mar	10.90	9.50	1.00	10.50	+ .40
Apr	13.30	11.22	1.00	12.22	+1.08
May	14.86	12.00	1.00	13.00	+1.86
Nov	3.70	2.61	1.17	3.78	− .08
1975 Mar	2.96	1.90	1.17	3.07	− .11
Apr	2.90	1.73	1.17	2.90	.00
May	4.22	2.60	1.17	3.77	+ .45
Nov	6.36	4.95	1.34	6.29	+ .07
1976 Mar	8.70	6.34	1.34	7.68	+1.02
Apr	8.66	6.75	1.34	8.09	+ .57
May	9.25	6.95	1.34	8.29	+ .96
Nov	5.30	3.55	1.49	5.04	+ .26
1977 Mar	6.90	4.90	1.49	6.39	+ .51
Apr	7.26	5.28	1.49	6.77	+ .49
May	8.72	6.30	1.49	7.79	+ .93
Nov	4.59	3.38	1.49	4.87	− .28
1978 Mar	3.79	2.38	1.56	3.94	− .15
Apr	3.95	2.47	1.56	4.03	− .08
May	4.85	2.84	1.56	4.40	+ .45
Nov	4.98	3.43	1.56	4.99	− .01
1979 Mar	6.21	3.87	1.85	5.72	+ .49
Nov	5.99	3.25	1.75	5.00	+ .99
1980 Mar	4.85	2.39	2.05	4.44	+ .41
Apr	4.23	1.94	2.05	3.99	+ .24
May	4.82	2.18	2.05	4.23	+ .59
Nov	8.94	7.00	2.05	9.05	− .11

Note: The April and May 1979 contracts are not listed above, since they were terminated early by emergency action.

the $1.00/cwt. level on only three occasions. Furthermore, the actual convergence between cash and futures is significantly better than a superficial examination of these statistics might suggest. With the exception of the November contract, there is a clear tendency for futures to trade at a premium to cash near expiration. This price behavior is probably related to the perishability of potatoes, which substantially increases the risk associated with delivering against futures. (This risk does not exist in November, since deliverable supplies are plentiful immediately following the harvest.) Thus, there is no reason to assume perfect convergence at expiration. Rather, hedgers should allow for a premium of futures to cash as the contract approaches expiration (except for the November contract). During the period surveyed in Table 12, the average differences between futures and cash for each contract were as follows: November: +6¢;[12] March: +38¢; April: +33¢; and May: +84¢. These figures can serve as a guideline for the expected basis near expiration. Further refinement is possible by noting that the premium of futures to cash tends to be wider in years of tight deliverable supplies.

A Maine producer attempting to determine the cash price he is locking in by selling futures should subtract the freight cost and the expected premium of futures to cash from the cash price. For example, if March futures are trading at $12/cwt., the freight cost is approximately $2.50, and the anticipated difference between futures and cash at expiration is 75¢, the farmer is effectively locking in a cash price of about $8.75. To be prudent, growers should always allow for an above-average difference between futures and cash. If used in this manner, the potato futures contract provides an effective hedging vehicle.

Historically, the favorable correlation between cash prices in Maine and other Eastern states suggests that futures provide a viable hedging tool for these areas as well. However, price variations between Maine and other regions can be quite substantial. Thus, for Central and Western producers, the New York Mercantile futures contract provides an imperfect hedge, at best. Growers in other regions who are interested in using the New York Mercantile contract for hedging purposes should construct a table indicating the historical basis between their local cash prices and futures prices. Such a table can be based on average weekly or monthly prices, but should include at least five years of data. A hedge could be considered if, after allowing for an unfavorable basis, futures prices still implied an attractive return.

Potato Spreads

The behavior of potato spreads is highly uncharacteristic of spreads in general. For most storable commodities, the premium a back month can command over a nearby month is limited to "full carry" (i.e., the cost of taking delivery, storing, and redelivering), while there is no limit on the premium that a nearby month can command since, in times of shortage, it is impossible to say what premium the market will place upon immediately available supplies. Also, for most storable commodities, nearby months will gain in a rising market and lose in a declining market. Potato spreads, however, behave in exactly the reverse manner: there is a limit on how far a nearby month can advance, relative to a more distant contract (of the same crop year), while the premium of a forward month is relatively open-ended; and distant months tend to gain in a bull market and lose in a declining market.

The behavior of potato spreads is a direct consequence of the intrinsic fundamentals of the market. Since potatoes are perishable, users cannot readily stockpile future requirements if a shortage is expected. The absence of a "hoarding factor" eliminates one of the key reasons for nearby premiums in other markets during times of shortage. Furthermore, supplies are always most ample around the fall harvest (October–November). As a result of these factors, a situation of relative near-term tightness (within the same crop year), as at times occurs in most commodities, does not really exist in potatoes. Consequently, there will never be a fundamental situation to justify the nearby months going to a premium. In fact, in seasons where supplies appear inadequate, the implications are for the tightest market conditions to exist late in the season. Finally, storage-related costs (interest, labor, and insurance) and implied losses (evaporation, breakdown) virtually guarantee that a more distant contract (of the same crop year) will maintain a premium to a nearby month.

A reasonable question might be: "If the premium of the distant month exceeds the storage cost (direct costs and costs implied by loss), why can't a trader buy the nearby contract, take delivery, and redeliver against the later contract at an apparent guaranteed profit?" (This operation is feasible in most storable commodities, and is the reason why—for those commodities—the premium of a forward contract to a more nearby position is limited to a given maximum difference.) The reason why this maneuver is not viable for potatoes is that *in a potato delivery the buyer must accept the actual commodity, rather than a warehouse receipt.* Consequently, the buyer must arrange for the transportation and storage of a perishable commodity. Most importantly, the buyer faces a very substantial risk that a portion of the potatoes could break down in the interim and fail to pass reinspection. Thus, in virtual direct contrast to most storable commodities, for potatoes it is the "distant" months which are not limited in the premium they can command over other more nearby contracts.

Conclusion

Contrary to popular belief, the correlation between prices and fundamentals in the potato market is among the best of all actively traded commodities. Furthermore, the relative consistency of the relationship between cash and futures near expiration leaves little doubt that futures are a viable hedging vehicle.

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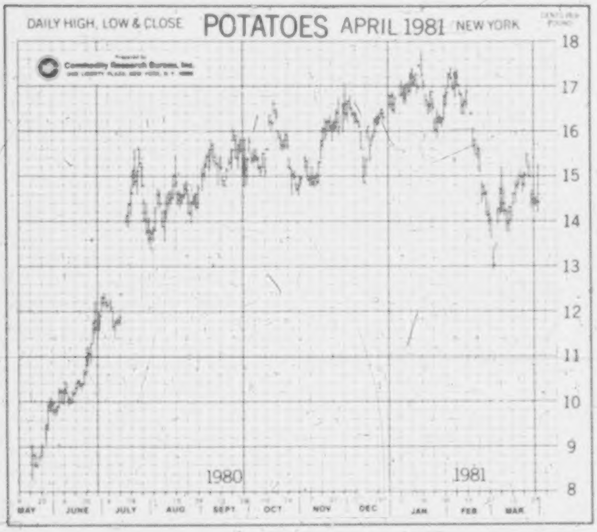
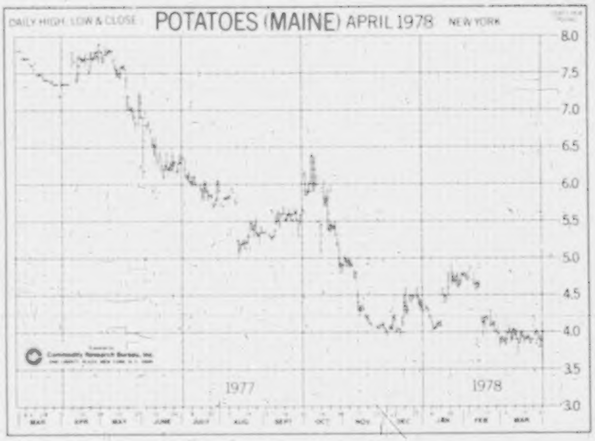
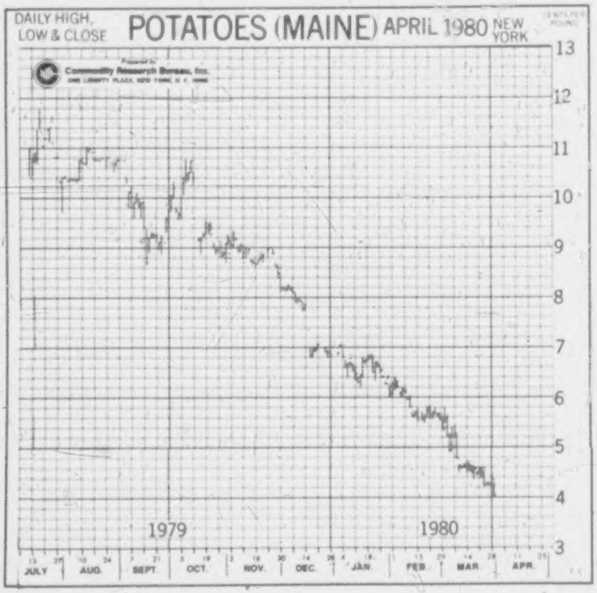
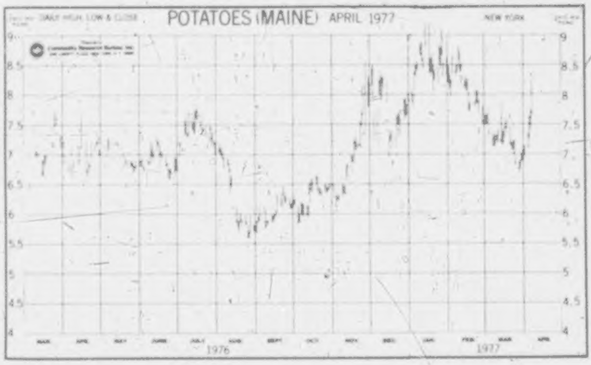
[12] The average difference is distorted by the highly abnormal wide premium of the November 1979 contract to cash (a consequence of reduced trade participation and a reluctance of shorts to deliver following the experience of the March 1979 contract). Excluding the 1979 contract, the average difference between futures and cash was -6¢.

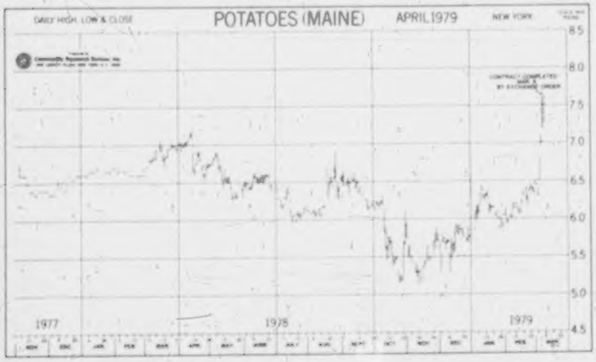
April Potato Futures Deliveries 1976–1981

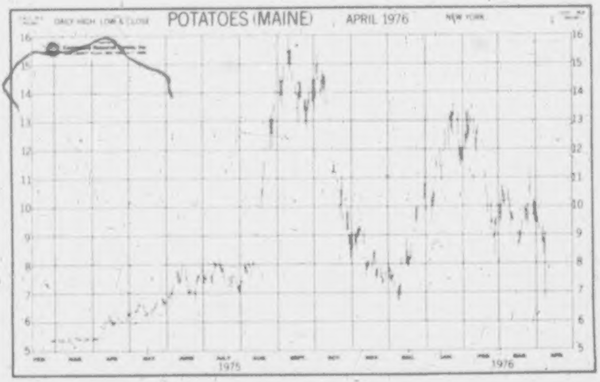












PRACTICAL TOOLS FOR TRADING CURRENCY FUTURES

BY ROBERT BOSTON

Introduction

Participation in currency futures has increased significantly since trading was initiated on the International Monetary Market (IMM) of the Chicago Mercantile Exchange on May 16, 1972. In recent years, futures trading activity has been stimulated by international economic and political developments arising from events in the Middle East affecting the supply and price of oil.

Consider that the 4.2 million currency futures contracts traded in 1980 were almost double the volume of the previous year, and that in 1979, total volume in currency futures exceeded that of previous years by a wide margin.

Thus, futures trading in the major foreign currencies provides a means for those who are "at risk" because of commercial or other transactions to hedge their currency risk, and also offers the speculator an opportunity for potential profit.

The following observations are intended to help the commodity trader in a fundamental approach to trading currency futures.

The forces that determine rates of foreign exchange can be as diverse as the participants, but there are certain basic fundamentals which can be easily grasped by the newcomer to foreign currency futures trading. These elements form a common denominator which, in time, foreign exchange rates must obey. They are:

Direct Forces
1. National Current Accounts
2. International Interest Rate Differences

Indirect Forces
1. Inflation
   a. Monetary Policy
   b. Other Factors

2. Political Factors
   a. Central Bank Policies
   b. Other Factors

A basic or broad-based knowledge of the above forces should provide the essential tools for accurate currency forecasting. These forces are discussed in some detail in later sections of this study.

Cash Currency and Currency Futures Prices

The currency of most international trade is the U.S. dollar. Commodity prices are quoted in dollars and most international trade is priced in U.S. dollars, although foreign exchange risk may be held by either trading partner, depending on the contract.

By custom, all world currencies are traded and quoted against the U.S. dollar. On world money markets, the custom is to trade the Deutsche Mark, for example, in terms of two marks equalling one dollar, whereas U.S. commodity futures traders are used to the reciprocal; one Deutsche Mark equals fifty U.S. cents.

If one sells a Deutsche Mark futures contract, for example, the seller is bullish on the dollar. Conversely, the buyer of a Deutsche Mark futures contract is bearish on the dollar. In other words, if Deutsche Mark futures are bought, dollars are being sold for future delivery, whereas if Deutsche Mark futures are sold, dollars are being bought (in effect) for future delivery. If one sells a contract of Deutsche Mark futures and buys a Yen futures contract, the dollar is basically excluded. (However, contract size differences yield different dollar amounts, thus creating some dollar risk.)

Most world currencies are traded spot (cash) for delivery in two business days. For example, Bank "A" buys dollars from and sells Deutsche Marks to Bank "B." In two business days, Bank "A" will receive payment in U.S. dollars from Bank "B." Bank "B" will receive payment in Deutsche Marks from Bank "A" in amounts fixed by the exchange rate. In currency futures, no payment (other than margin) is required unless delivery is taken on the futures contract.

The difference between the spot price (cash) for a specific currency and the currency futures price is a certain number of "points" based on interest rate differentials. This point difference is determined by the formula on page 21.

The point differential between the cash exchange rate and the rate indicated by the futures price will be a premium (based on U.S. commodity futures terms) if Euro-dollar interest rates are higher than Euro-currency rates, or a discount if Euro-currency rates are higher than Euro-dollar rates.

Current Account

The most important statistic for long term currency forecasting is the current account of a given nation. *The current account for a country represents the total amount of goods and services that nation has transacted internationally.* These non-domestic transactions include the merchandise trade account. For many countries, the merchandise trade account represents the largest component of the current account. Other components include service transactions such as dividend and interest payments, plus government grants, military transactions, remittances, pensions and other transfers.

A current account surplus, or deficit, will alter the supply and demand relationships of a currency. Due to the long term nature of its components, the current account will exert a long term positive or negative influence on a currency's exchange rate, depending upon whether it shows a surplus or a deficit.

Changes in the current account will influence the trader's attitude towards a currency. It is recommended that yearly current account figures for all currencies traded be gathered for the last three to five years and kept up-to-date on a monthly basis.

A trader can develop a good understanding of the long term direction of a currency's exchange rate by monitoring the trend of the current account statistics. In general, through past observations, it is evident that *large current account deficits or surpluses are not easily turned around without a prior substantial move in the exchange rate.*

$$\text{Euro-Dollar Deposit Rate} - \text{Euro-Currency Deposit Rate} \times \frac{\dfrac{\text{Spot Price}}{100}\ (\text{U.S. Terms})^{*}}{\dfrac{360}{\text{No. of days to maturity}} + \dfrac{\text{Euro-Dollar Deposit Rate}}{100}} = \text{Pt. Differential}$$

To Illustrate:
If:

(a) Spot (cash) Swiss Franc (SF) = 1.96 SF to 1 dollar (European terms) or
1 SF = .5102 cents (U.S. terms): $\frac{1}{.5102} = 1.96$ and $\frac{1}{1.96} = .5102$
(b) Today's date: Feb. 17—Spot date Feb. 19
Futures date: Mar. 18; No. days to maturity—27
(c) Euro-Dollar interest rate for Feb. 19 to Mar. 18—17⅛%
Euro-Swiss Franc interest rate for Feb. 19 to Mar. 18—6⅛%

Then:

(1) $$17.125 - 6.125 \times \frac{\dfrac{.5102}{100} \text{ or } .005102}{\dfrac{360}{27} \text{ or } 13.33 + .17125} = \text{Pt. Differential}$$

(2) $$11 \times \frac{.05122}{13.33 + .17125} = .00415$$

(3) U.S. cash price (.5102) + differential (.00415) = futures price (.51435)

* For European terms, substitute Spot × 100 (1.96 × 100)

The current account's trend lags behind the exchange rate's trend by six months to two years. During this period of time, a currency may become basically undervalued or overvalued, although the actual foreign exchange rate may not be considered so by market participants. Therefore, it is imperative to observe the changes in current account trends closely in order to determine the long term trends of a currency's exchange rate.

Terms such as "hard currency" or "intrinsically weak currency" refer to current account position. Foreign exchange rates are dynamic, reflecting the constant change of the economies they represent. Speculators must also be dynamic, changing along with, and sometimes before, the actual event.

When examined in detail, the components of the current account are quite complex. For trading purposes, the final tabulation of the current account is the most useful, but as one becomes more familiar with the market, factors that might alter large portions of the current account should be noted to serve as a signal that changes may be ahead.

A large portion of the current account is the merchandise trade balance. For each country, a trader must examine the export strength and import weakness, and measure the changing forces of such factors as price, supply, and demand against future trade potential.

Economic cycles, as measured by the Gross National Product (GNP) or Gross Domestic Product (GDP), exert great influence on the trade account. A recession reduces imports, particularly in the consumer sector, while exports may increase as business seeks other markets for its products. An expanding economy increases imports, while exports may diminish in favor of the domestic market. When one trade partner is in a recession, while another is in an expansionary phase, the potential impact on both trade accounts cannot be over-emphasized. These cycles affect the supply and demand for a currency and have a direct bearing on the foreign exchange rate.

Traders must have an organized approach to analyzing potential changes in import-export activity. The following questions serve as a guide or checklist for the four major components of the trade account (Raw Materials, Agricultural Products, Manufacturer's Consumer Goods, and Manufacturer's Producer Goods):

1. Are there substitutes that may be used, and what price scenario would induce their use?
2. Has domestic consumption increased or decreased? Why? Because of population growth, price, taxation, political priority, or marketing?
3. Has domestic production increased or decreased? Why? Because of prices, capacity and its utilization, strikes, political strife, cost of labor, productivity, government regulation, or marketing expertise?
4. What government trade barriers exist? Are there import or export quotas, tariffs, etc.?

In addition, the following questions apply to each individual group:

Raw Materials

1. What percentage of imports and exports consists of raw materials, and what has been the effect of changes in the import-export flow on the trade account?
2. Have new discoveries increased proven reserves for such raw materials as minerals and oil, or have proven reserves declined?

Agricultural Products

1. What percentage of imports and exports are from agricultural products, and what has been

the effect of changes in the export-import flow on the direction of the trade account?

2. Has there been an increase or decrease in productivity of the agricultural products sector? Will it affect the trade account?
3. Is consumer propensity for imported agricultural products increasing?
4. Are unusual weather conditions, such as a drought, affecting the ability to export, or the need to import, agricultural products?

Manufacturer's Consumer Goods

1. What percentage of imports and exports consists of manufacturer's consumer goods, and what has been the effect of changes in their import-export flow on the trade account?
2. What are the relevant economic cycles as measured by Gross Domestic Product (GDP) or Gross National Product (GNP)?

Manufacturer's Producer Goods

1. What percentage of imports and exports consist of manufacturer's producer goods (capital goods), and what has been the effect of changes in their import-export flow on the direction of the trade account?
2. What is the level of, and rate of change in, technology? How will changes affect import-export potential?

In concluding our discussion of merchandise trade, it is important to note that seasonal factors also affect the trade account, and thus supply and demand for a currency also changes on a seasonal basis, influenced partly by peaks and valleys in import/export seasons. These patterns must be analyzed on a per-country basis.

In comparison to the trade account, which draws media attention, the hidden portion of the current account goes almost unnoticed. It is very difficult to measure potential changes in investment income, which includes interest earnings and dividends. Dividends may remain unrepatriated and interest income will vary with interest rate changes. However, both factors can be approximated by projecting past figures on a pro rata basis.

Military transactions are a function of existing political alliances as well as production capabilities. The conditions that would alter the volume of this trade are very visible and easily recognizable.

Tourism must also be considered as a force which affects the supply and demand relationships of currencies. Tourism is influenced by the actual exchange rate and the marketing efforts of the host country, which may render a vacation in another country cheap relative to one's own. Periodically, exchange rate changes over a period of time create glaring differences in the cost of living between two countries. Resulting increased tourism may exert a countervailing impact on the exchange rate.

Interest Rates

Interest rates are the most dominant force in the foreign exchange markets today, both from a real and a psychological point of view. The major reason is that capital flows are much larger in total volume than foreign exchange transactions involved in trade. Newspapers often tell us that a currency appreciates because higher interest rates make that currency more attractive to hold. This represents only part of the force that interest rates bear on exchange rates. The influence of interest rates can be illustrated by the following currency futures transaction:

> Commodity futures trader "A" sells one March Deutsche Mark contract to "B" who happens to be an arbitrageur[1] on the trading floor representing an arbitrage bank. The arbitrage bank is the new owner of one Deutsche Mark futures contract (banks refer to it as a forward contract). The arbitrage bank will then sell spot (cash) to another bank in the interbank market for the amount of one Deutsche Mark contract, reducing their foreign exchange risk to zero. The arbitrage bank is now short for spot delivery and must borrow 125,000 Deutsche Marks from another bank, from spot date to March futures date.

This brings into play the difference between the Euro-Dollar and Euro-Mark interest rates. The swap cost, in U.S. points, is based on the difference between the Euro-Dollar rate and the Euro-Mark rate for a given maturity. (See formula on page 21.) The spot (cash) price plus this swap cost equals the futures price. Commodity trader "A" by way of a floor trader arbitrageur and an arbitrage bank has, in effect, borrowed one Deutsche Mark contract (125,000 DM). By borrowing Euro-Marks and lending Euro-Dollars, commodity trader "A" has affected the interest rates of both countries.

Similarly, foreign exchange traders borrow currency to take positions. For example, currency trader "C" will sell 10 million Deutsche Marks spot (cash). Assuming that the exchange rate goes down, currency trader "C" makes a foreign exchange profit. And, as he borrows on a daily basis swap (assuming Euro-Dollar interest rates are higher than Euro-Mark rates), he earns interest by borrowing at, say 6% (Euro-Mark) and lending at, say, 12% (Euro-Dollar). The wider the differential, the greater the interest income. Assuming that the exchange rate remains the same, currency trader "C" will still earn interest at the differential rate. Assuming that the exchange rate goes up (and using the 6%–12% in our example), the Deutsche Mark must appreciate by more than 6% per annum for currency trader "C" to lose money.

Let us demonstrate further the powerful force of interest rates by yet another example, this time with businessman "D." Businessman "D" estimates that a U.S. real estate deal will be profitable if he can borrow money at 12%. The current price of money in the U.S. is 20% and the bank is hesitating due to credit conditions. Businessman "D" decides instead to borrow (Swiss Francs), say for one year, in Switzerland at 6%. Currency hedge facilities are available through the bank or currency futures markets, but businessman "D" decides not to hedge because he does not expect a 6% appreciation in the Swiss Franc over the next year. Let us again consider three possible conditions. First, the Swiss Franc depreciates over the year. In this instance, "D" has borrowed money at 6% and made a foreign exchange profit which reduces his interest cost. Second, the Swiss Franc exchange rate stays the same. Thus, "D" has no foreign exchange profit or loss, but has financed his project at a cost of 6%. Third, the Swiss Franc appreciates. In this case, the percentage appreciation of the Swiss Franc is added to the original borrowing cost of 6% to arrive at businessman "D's" effective total cost of financing. However, the Swiss Franc must appreciate by 14% to equal his alternate cost in U.S. dollars (20%). As a practical matter, businessman "D" should have had hedge capabilities set up with a bank or in currency futures to provide "insurance" against currency price appreciation.

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[1] Arbitrageurs hope to earn a few points by taking advantage of price disparities between the interbank foreign exchange market and the futures market. By so doing, they tend to keep prices in line. These are two different markets trading the same product, tied together by arbitrageurs. The bank market is larger by far in volume, but it is not necessarily the leader in price initiative.

Our fourth example involves a multi-national corporate controller who meets financing needs from whichever country offers the best price with the least apparent exchange risk. For this person, the optimal situation is to find a weak currency with a low interest rate.

Key Interest Rates

Let us define the key interest rates and discuss who uses the various debt instruments, and their impact on foreign exchange rates.

For foreign exchange purposes, the most important interest rates are the Euro-currency rates. For illustrative purposes we will use the Euro-dollar, which represents about 80% of the market. But the same principles apply to Euro-marks, Euro-francs, etc. *Euro-dollars are dollar-denominated deposits held outside the U.S.A.* If, for instance, you transfer dollars from a U.S. bank to its branch in London, you have created Euro-dollars. The transfer is usually an accounting entry with no cash transfer. The Euro-dollar market is, in essence, an international pool of liquid capital which can react in response to commercial conditions and to the free interplay of market forces. Although there has been some intervention by central banks and the Bank for International Settlements, the market is not subject to extensive direct controls.

Foreign exchange traders watch Euro-currency interest rates closely. Higher interest rates make a currency both more attractive to hold and more costly to borrow. In addition, currency traders worldwide follow rates carefully and take market positions based on changes and anticipated changes in Euro rates. *Due to the volatility and high visibility of Euro-dollar rates, it has become customary to trade foreign exchange based on changes in U.S. rates.* Therefore, we will discuss other interest rates in the context of U.S. rates, although in most instances, comparable instruments exist in other countries.

Federal Funds Rate

The Federal funds rate, a key short term rate, is used by "day traders" as a guideline for currency trading. Although of questionable reliability as a longer term predictive tool, some traders follow it, and thus its influence. A Federal funds' transaction usually involves the purchase or sale of member bank deposits at Federal Reserve Banks for one business day at a specified rate of interest. Because the Federal funds' rate is an indicator of the supply of and demand for excess bank reserves, it suggests potential direction for other interest rates.

A trader should keep in mind that European markets close between 10:30 and Noon, EST. This time is significant because European traders adjust their positions to get within overnight trading limits. A day trader should be well aware of this fact, particularly on a Friday.

In addition, the foreign exchange markets' preoccupation with interest rates has led to "prime time" Federal Reserve watching between 11:30 and Noon EST. Just as Federal funds may provide a clue to interest rate direction, so does Federal Reserve action in the open market. During this time frame, the Federal Reserve Bank may enter the market to drain or add reserves, and the interest rate markets react accordingly. Frequently, no policy significance can be drawn from the Fed's action on a daily basis, but day traders seeking an edge, react first and ask questions later.

The Federal funds rate and the activities of the Fed are often responsible for mid-day market action in currency futures. They affect day traders, such as locals and bank traders, who carry large positions during the day, but generally do not maintain large positions overnight.

Other Important Interest Rates

The Prime Rate

It is our opinion that little significance can be attached to prime rate changes because it is a lag rate, indicating past rather than future market conditions. The one apparent exception is the change in direction of a long term trend in the prime rate. Certain market participants look to a trend change in the prime rate as positive proof of a major turnaround in interest rates.

Certificates of Deposit

C.D.'s are important because they are comparable to Euro-dollar deposit rates. Certificates of deposit have reserve requirements, which makes a necessary adjustment, but C.D. rate changes can precede Euro-dollar changes.

Time Deposits

Time deposits are a popular method of raising funds, particularly in Europe.

Discount and Lombard Rates

Changes in these rates generally indicate monetary policy significance. When changes are initially announced, there is usually a reaction that is soon forgotten. Business policy decisions usually take a few days after such an announcement before their influence appears in the market. Discount rates changes are important factors influencing the market.

Treasury Bills

Treasury bills (T-bills) are an obligation of government to pay the bearer a fixed sum after a specified number of days from the date of issue. They are sold at a discount through competitive bidding.

A large amount of world reserve assets are held in the form of T-bills. The importance of the rate of return on the T-bills cannot be overstated. Central banks throughout the world are sensitive to the rate of return that they receive on their reserve assets. One of the greatest forces in foreign exchange is the shifting of reserve assets from one country to another. Reserve asset sums can be very large. We recommend monitoring T-Bill rates very carefully for major yield changes.

The U.S. T-bill futures market is of major importance to currency futures trading. First, as previously mentioned, the futures market keeps us advised of major changes in U.S. T-bill rates. Second, and probably serving as the most important determinant for day trading, is the fact that T-bills are used by locals as a guide for currency trading. T-bill prices move inversely to yield. If T-bill prices rise, currencies tend to rise, and vice-versa. To suggest that currencies move up and down based strictly on T-bill rates is nonsense, but many commodity traders use T-bills as a barometer for interest rates in general. In the absence of other factors, commodity day traders will use T-bill futures as a guide for currency trading. Historically, gold futures were used as a guide for trading currencies, but T-bill futures are currently more in vogue. T-bills, gold, and currencies are traded on the same exchange, the Chicago Mercantile Exchange (IMM), which makes it easier for local participants.

The yield on long term (over one year) debt is also important from an investment point of view. A good deal of OPEC surpluses are placed in long-term notes and bonds. When considering these investments on an individual currency basis, yield and average inflation rate to maturity must be considered. Large currency flows usually occur when the inflation expectations of a high or a low-yielding bond change.

Inflation

Inflation psychology plays a key role in exchange rate determination. Some experts believe that to maintain price parity of any given commodity between two countries with different inflation rates the exchange rate must change by the amount of the differential. As a result, some investors and traders hold that an inflation differential between two countries must be offset by an interest rate differential of the same magnitude to keep the exchange rate in equilibrium. Certainly, over a period of time, inflation will have an effect, but one must keep in mind that the major determinants of exchange rates are current account and interest rates.

Inflation and the forces that create it have a definite impact on the long-term direction of a currency. Inflation, in most cases, cannot be quickly reduced, but inflationary expectations can be abruptly changed by any number of factors. *When inflationary expectations change, the market's changed perception (intrinsically weak, or hard) of a currency becomes a powerful, motivating force that can result in a large move on heavy volume.*

Relative inflation as measured by CPI indexes for individual countries is statistically unreliable, because components and the measurement of these components vary from country to country. In addition, countries are individually dynamic. The base years for calculation of the CPI index for each country often differ. But more importantly, the CPI figure is a domestic figure, only applicable for that economy.

A vivid practical example of the ineffectiveness of these indexes has been the relationship of the British Pound to the Swiss Franc. Over the past two years interest rate differentials have offset inflation rate differentials, yet rather than maintain an equilibrium price level, the British pound appreciated by 36% against the Swiss Franc during that period. This fact demonstrates the unreliability of CPI indexes as a foreign exchange determinant.

In order to solve the dilemma, we have divided inflation into two parts: Inflation due to (1) monetary policy, and (2) other factors.

Monetary policy is another key determinant of exchange rates, both from the interest rate aspect and the overall supply of money. For commodity traders, records of a broad money measure, such as the M2 or M3 money supply figures should be kept on a monthly basis. If the percentage growth of these aggregates is within the central banks' targeted range, and these ranges are comparable with growth targets in other countries, a trader can consider monetary policy non-inflationary. An example of a change in inflationary expectation that had immediate repercussions was the introduction by Federal Reserve Board Chairman Paul Volcker on Oct. 6, 1979 of monetary policy designed to control money supply and not interest rates. Demand for money is not easily measured. Monetary targets are often exceeded when a currency is rising because of demand based on such factors as current account, interest rates, or capital investment. Demand must be measured and assessed on a per-country basis.

Other inflationary sources that can change expectations are government budgets, productivity, supply and demand for commodities and labor, and government regulation and taxation.

No discussion of inflation would be complete without mention of exchange rate-induced inflation or imported inflation. Let's assume that Country A imports goods from Country B and that the exchange rate is fixed. Country B has twice the rate of inflation of Country A. Since the exchange rate is fixed, goods imported from Country B are inflating, on average, at twice the rate as other goods in Country A, thus raising its inflation rate. Next, let us assume that inflation rates are the same, but Country B's currency appreciated against Country A's currency by 10%. The effect is a 10% increase in the cost of goods imported from Country B. An excellent example is the cost of crude oil which is priced in dollars. If a currency appreciates against the dollar, crude oil costs are reduced for that country, and vice versa. This phenomenon often motivates central banks to support their currency. This represents an attempt by an important participant to alter market forces. In reality, intervention by a central bank temporarily changes supply and demand like any other order in the market, and market forces are larger than any participant.

Political Factors

The political role of central banks is direct and very visible. There are three approaches taken by central banks to control or manage exchange rates.

The first, *intervention*, is a stop-gap measure used by central banks to directly control the exchange rate or its rate of change. Intervention alters supply and demand, but it does not change market forces. Central banks intervene by drawing down on monetary reserves, or by borrowing from another central bank (swap agreements). There are other methods of borrowing to produce funds for intervention, but borrowed money must be repaid, and herein lies the weakness of intervention. Central bank intervention losses amounted to an estimated $10 billion in the 1970–80 period.

Second, given the importance of interest rates in exchange rate determination, a central bank's *monetary policy* is critical to exchange rate determination. Since interest rates are a force, a central bank will raise or lower interest rates to produce the desired effect on the exchange rate. From the point of view of the speculator, the ideal situation occurs when a central bank can no longer use the interest rate option because of domestic economic considerations.

The third approach is *foreign exchange and related controls.* Floating foreign exchange rates came about because governments could not control the dynamic forces that determine rates of exchange. Almost every country has tried its share of foreign exchange controls, but most have found them ineffective. Relatively free-floating exchange rates have worked, and although short term domestic interest is not always served, most central banks prefer the flexibility of floating rates.

Other political factors would have to be examined case-by-case as to their effect on current account, interest rates, inflation, and the exchange rate. Some recent examples include:

—The Russian grain embargo
—Freezing of Iranian assets
—Import and export quotas or tariffs of all countries
—The making of exports a national priority (Japan)
—The European Economic Community (EEC) and its Common Agricultural Policy (CAP), and its trade policies.

Characteristics of Some Foreign Currencies

National economic situations, of course, differ in ways that affect the currency markets. Some guides to these differences follow:

Pound—Great Britain

1. Self sufficient in oil: soon to export.
2. High interest rates and high inflation rates.
3. Conservative government.
4. Low productivity.

Yen—Japan

1. Heavily dependent upon export-import trade.
2. Strong seasonal patterns.
3. Interest rate considerations secondary to trade considerations.

Dollar—Canada

1. Large trade surplus necessary to offset deficit from service transactions.
2. Money market closely tied to U.S.

Mark—West Germany

1. Dependent on large merchandise export trade to offset raw material imports and deficit in capital transactions.
2. Large volume currency with substantial domestic money market.
3. Geographically near Communist countries.
4. Central bank has foreign exchange expertise and is very inflation-conscious.
5. Members of the European Monetary System.

Franc—Switzerland

1. Large trade deficit offset by surplus in service transactions.
2. Usually maintains approximately 10% price premium to Deutsche Mark.
3. Financial currency that is very interest rate sensitive.

Conclusion

In summary, foreign exchange trading carries an aura of mystery as it passes through the world's time zones from one financial center to another. Modern telecommunication systems have created a global financial community which has joined diverse factions into a continuous viable market. Commodity traders have become an integral part of this market in recent years. This study is designed to assist commodity futures traders in defining basic market forces affecting foreign exchange rates. A working knowledge of these fundamentals should contribute to more consistent profits in foreign exchange futures.

(Editor's note: See Currency section for weekly currency futures charts.)

HEATING OIL FUTURES—AN EXPANDING NEW MARKET

BY JAYNE B. BALL

Introduction—The First Two Years

Since its introduction in November 1978, the New York Mercantile Exchange's Heating Oil futures contract has experienced tremendous growth as the oil industry responded first with curiosity and later with keen interest to this new financial tool. At the beginning, there were many who were doubtful about the new contract. The Rotterdam delivery version, which the Exchange initiated in 1974, had failed to take hold; and at that time, oil prices seemed as though they would only rise, making it appear inadvisable to "go short" the market. However, with the decontrol of heating oil in the U.S., the Exchange then designed a U.S. delivery contract which was better suited to the commercial needs of the industry. Designating delivery in New York Harbor, U.S. firms dealing in No. 2 oil could readily utilize the contract to protect their forward requirements for purchases and sales without tying up limited storage capacity.

The Exchange exerted considerable efforts to develop this market. Many in the oil industry had no prior contact with futures contracts, while account executives at the various commission houses had little knowledge of the oil market. Thus, the Exchange organized seminars and began distribution of information on the workings of the markets, both cash and futures, in order to educate the industry, which would potentially utilize the futures market and the brokers who would eventually handle their accounts. As a result, the futures market has now grown to a respectable level.

This growth of futures trading in heating oil is not surprising. Aside from Exchange efforts to promote the contract, the world events of the last two years contributed to extreme price volatility for crude oil and its products. One of the most significant developments of recent years in the oil market centered around the Iranian revolution in 1979 and the subsequent taking of Americans as hostages on November 4 of that year. The immediate impact on the oil industry was concern that the Iranian action would result in a severe curtailment of crude oil shipments, given the cutoff of Iranian sales to the U.S. and also the possibility of U.S. military involvement in the Middle East. Prices rose dramatically through November and December 1979, reaching a peak of $1.09 per gallon. But there was no U.S. military involvement, the cutoff of Iranian oil sales to the U.S. had a limited effect because the 1979 winter season proved unusually mild, and Americans turned their thermostats down, resulting in a sharp decline in consumption. As it was, inventories were quite high because the Department of Energy had ordered oil companies to build up inventories of 240 million barrels in late summer of 1979. Thus, early in 1980, storage facilities were filled to capacity while consumption and prices were falling. The price declined sharply and continued to drop into late spring with some stabilization developing around the mid-70¢ per gallon range. For firms which had purchased oil during the November–December period and had not moved it, the losses were heavy. The price decline was a clear indication that oil prices do not always rise. Thus, futures trading in heating oil offered a potential viable hedge for both buyers and sellers of the product.

Fundamentals of the Heating Oil Market

Crude—The Source

Heating oil is, of course, a petroleum product; thus, developments in the crude oil market have a significant impact on pricing of heating oil and other petroleum products. Since crude prices eventually are reflected in product prices, analysis of the heating oil market should begin with the crude market.

The global supply of crude oil, including production and stocks, is a key factor in price determination. High inventories can reduce the price impact of cutbacks while reduced production in periods of low inventories can set off buying sprees by consuming countries who seek to build stocks sufficient to carry them through the anticipated shortfall.

Oil production and stocks are measured in million barrels per day (MBD). Where the oil is produced and stored is nearly as critical to pricing prospects as how much is produced. Worldwide, the largest producers of crude oil are the U.S.S.R., the U.S. and the Organization of Petroleum Exporting Countries (OPEC) nations. The U.S.S.R. has been a net exporter of oil, supplying the Soviet bloc. The U.S. has been a net importer, with domestic production falling short of demand.

OPEC accounts for approximately half of world crude oil production and most of the oil available for export. This factor has had significant impact on the politics and pricing of oil over the past decade. Political instability in producing areas (e.g., Iran) can influence the flow of crude supplies. Of the OPEC members, the Middle Eastern countries are the largest producers, with Saudi Arabia clearly the leading supplier of crude. Prior to the 1970's, the U.S. major oil companies had direct access to Arabian crude oil. But the rising power of OPEC over the past decade changed the relationships of these companies and resulted in a greater uncertainty surrounding crude availability.

Timing of OPEC meetings has a strong influence on futures prices as these meetings often result in higher prices for crude. Since 1973, OPEC has raised prices from $3.39 to $34.58 per barrel. Traders should be aware of these meetings and the possibility of additional price increases, or perhaps even supply cutbacks.

Saudi Arabia, the largest OPEC producer, has generally held a moderate course favorable to the West. Saudi Arabia increased output to offset supply cuts in Iran and Iraq in 1980. However, the Saudis have also used their oil to put political pressure on the West. For example, the Saudis have threatened to reduce production and also raise prices if the U.S. proceeds with its stockpiling plans.

The buildup of the U.S. crude reserve will have an impact on price. The U.S. Strategic Petroleum Reserve established by the Carter Administration to stockpile one billion barrels of crude, is favored by the Reagan Administration. Efforts to increase the rate of filling the reserve (authorized at 100,000 barrels per day early in 1981), would create additional demand for crude in the world market. Such efforts would also have greater impact on the overall supply/demand balance, as well as political consequences in light of Saudi objections to the U.S. program.

As with all commodities, the quantity of available oil and distribution of supply are critical to pricing prospects. Because of the political aspects involving the Free World, the Communist Bloc, and OPEC, the "how much there is and who has it" question takes on increasing significance.

The lifting of price and allocation controls on crude and products will likely have an impact on U.S. crude production. Since 1973 the U.S. industry had been hampered by price controls which kept domestic crude prices well below world levels and at the same time subjected the industry to complex regulations which impaired the efficiency of the organization and distribution systems. With President Reagan decontrolling oil prices eight months earlier than the original schedule, the oil industry has begun the process of changing its allocation systems. With the demise of the entitlement program, U.S. oil companies will compete with one another on an equal footing for crude oil priced at levels reflecting the overall international supply/demand balance.

Although the full impact of free market pricing and allocation will take time to be felt, the entire structure of the industry will be responding to the renewed freedom of the marketplace. Expanded exploration and development of domestic resources has been evidenced since controls on "new oil" were lifted previously. Moreover, the industry had already begun to gear up enhanced recovery operations in anticipation of the expiration of controls on "old oil" in October 1981 (President Reagan's action only clipped eight months off the life of controls).

While the immediate impact of ending price controls was an increase in prices to reflect world market levels for barrels previously held at lower price levels, it should not be assumed that the absence of price controls means persistent higher prices. Whenever the price of a commodity or product is held below market value (i.e. below what buyers are willing to pay for it), demand is generally excessive relative to available supply. Once price restrictions are removed, the price will rise to the level at which buyers demands can be satisfied with the given supply level. Although producers obviously seek to maximize profits by not increasing supply beyond the expected demand level, supply gluts can and do occur. Consequently, oil prices would have to adjust downwards to allow the market to absorb excess supplies during such periods. Due to limited storage capacity for both crude and products, a steady flow of oil through the production and distribution cycles is required. Thus, such surplus crude oil conditions will periodically have an impact on the entire pricing structure for crude and products.

Supply of Heating Oil

The bulk of U.S. heating oil is refined domestically. Imports account for only about 5% of the domestic supply of heating oil.

Heating oil is a petroleum distillate, a group which accounts for approximately 20–21% of the yield from an average barrel of crude. Distillates are primarily used in the heating of residential homes and small apartment houses. Diesel fuel, also a distillate, is used to power trucks, buses, tractors, railroads, and the increasing number of diesel engine automobiles. Table I below shows the changes in the breakdown of products from the crude barrel from 1978 to 1979. These figures are available from the Department of Energy (DOE) as well as the American Petroleum Institute (API).

TABLE I

Breakdown of the Petroleum Barrel (42 Gallons)

Category	1979	1978	
	Percentages	Gallons	Percent
Gasoline	43.0	18.32	43.62
Jet Fuel	6.9	2.57	6.12
Ethane (incl. Ethalene)	.1	.04	.10
Liquid Gas	2.3	.96	2.29
Kerosene	1.3	.42	1.00
Distillate Fuel	21.5	8.78	20.90
Residual Fuel	11.5	4.54	10.80
Petrochemicals Feed Stocks	4.7	1.52	3.62
Special Naphtha	.6	.29	.70
Lubricants	1.3	.54	1.29
Wax	.1	.04	.10
Coke	2.6	1.05	2.50
Asphalt	3.1	1.14	2.71
Road Oil	—	.04	.10
Still Gas	3.8	1.36	3.24
Miscellaneous	.8	.39	.88
TOTAL	103.6*	42.00	100.00%

* There is an overage of 3.6% because processing and additives result in more product than crude input.

Source: DOE, Energy Information.

Depending on market conditions, refiners can adjust their runs to produce more heating oil when demand is strong or stocks are low; conversely, less can be produced to alleviate excessive inventories. Changes in product mix are generally associated with seasonal factors, running more heating oil during the peak demand winter months and more gasoline in the summer vacation/travel season. However, refiners will alter yields whenever it appears more profitable to do so. While ability to adjust yields is limited, it is generally sufficient to alleviate temporary imbalances of supply and demand. By reducing heating oil production to a level below the rate of consumption, offtake can help reduce burdensome stock buildups.

Distillate stocks are generally translated into the number of days' supply. Stock levels are highly seasonal, with a building of inventories from late spring through September, and a reduction of stocks from October to March corresponding with the winter heating season. Chart I on page 29 reflects the significant changes in the average monthly inventories for distillates which are a critical factor in price determination.

Typically, prices for heating oil follow the seasonal changes in stock levels. Prices are generally lowest in late spring following the end of the winter heating season (see Chart II on page 29 which shows average monthly spot prices for East Coast cargoes). As the inventories begin to build in late summer and early fall, prices tend to rise in anticipation of winter demand, peaking in late fall. However, this pattern is sensitive to any disturbances and/or changes in world crude market supplies.

The limited storage capacity for crude oil and products contributes to the volatility of oil prices. Storage is generally on a short term basis. Although many firms have contracts for as long as a year or more to lease space, the agreements generally specify a minimum of throughputs (inflow/outflow). Once refined, products must be moved to the consumer and utilized or the whole refining cycle can be backlogged. The industry is therefore extremely vulnerable to declines in product offtake, as well as to changes in world crude supples. (Table II, below, shows U.S. distillate production, consumption, imports—exports in barrels per day, 1975–79.)

TABLE II
U.S. Distillate Consumption, Production, Imports, Exports—1975–1979 (Barrels Per Day)

	Domestic Consumption	Refinery Domestic Production	Imports	Exports
1979	3,308,000	3,147,000	196,000	4,000
1978	3,474,000	3,167,000	173,000	3,000
1977	3,352,000	3,277,000	250,000	1,000
1976	3,139,000	2,932,079	143,753	
1975	2,851,000	2,653,835	155,282	

Source: DOE, Energy Information.

Demand

Heating accounts for over 40% of distillate consumption, the largest single outlet, with diesel usage accounting for approximately 29% of distillate consumed. Table III reflects the breakdown of distillate consumption by use.

The foremost influence on heating oil consumption is weather. The colder the winter the greater the quantity of oil consumed, whereas milder winters result in reduced oil use. Heating Degree Days are used to determine the rate of consumption for heating oil. The measure was devised to give distributors a guide as to when their customers' home tanks would run low based on the mildness or severity of winter weather which is a key determinant of how much fuel would be consumed. The higher the number of heating degree days, the greater the consumption of heating oil.

The seasonal reduction in heating oil consumption during the summer is somewhat counterbalanced by increased use in the generation of electricity for air-conditioning purposes. Industrial usage is responsive to the business cycle, with consumption falling during periods of recession. Overall, the combination of factors makes consumption somewhat unpredictable.

Price and economic conditions have recently become more important in determining consumption levels. When fuel prices were low, price elasticity of demand was considered to be relatively inelastic. Since the gradual removal of price controls on heating oil in 1976, the price of the fuel has risen sharply, reflecting the increase in world prices for crude. With the rise in price, demand proved to be less inelastic than previously thought because some consumers apparently chose to invest in insulation and/or to lower their thermostats in order to stem the tide of increasing heating fuel costs. The drop in 1979–80 consumption was anticipated due to the abnormally mild winter. However, further cuts were seen in 1980–81 despite extreme cold in early winter. This consumer response, plus conversions to alternate fuels, resulted in a greater-than-anticipated decline in usage.

Pricing
The Contract versus the Spot Market

Traditionally oil products have been sold on contract. Sellers enter into long term agreements with buyers which specify time and quantities, but not the price. The price is determined at time of transfer. Called the posted price, it is generally announced by the seller and may be altered as the seller chooses. The contract thus gives the buyer the right to purchase a certain quantity of heating oil at the posted price upon delivery. The contract market accounts for better than 80% of the oil purchased.

The spot market has been increasingly active in recent years. Spot prices tend to reflect the marginal oil transaction, absorbing excess supplies in times of price weakness and allocating some supplies to the highest bidders when availability falls short of needs. Spot prices generally lag posted prices in periods of abundant supplies and weak offtake, while the spot market will outpace the advances in the contract posted price in a rising market. The futures market closely tracks the spot price. Chart III on page 30 shows the correlation of nearby futures and spot market prices.

TABLE III
U.S. Consumption of Distillate by Use—1976–1978 (1,000 Barrels)

Use	1976	1977	1978	Percent Of Total—'78
Heating	543,895	538,845	533,069	42.40%
Diesel	297,249	330,864	360,799	28.70%
Railroad	97,467	99,306	99,841	7.94%
Indust.	79,956	96,502	94,797	7.50%
Utilities	60,570	76,681	77,175	6.14%
Vessel Bunkering	28,330	33,512	37,591	2.99%
Military	17,574	20,121	20,320	1.61%
Oil Comp.'s	14,523	19,954	19,410	1.54%
Other			13,965	1.10%
TOTAL	1,150,929	1,230,179	1,257,061	100.00%

Source: DOE's, Sales of Fuel Oil & Kerosene.

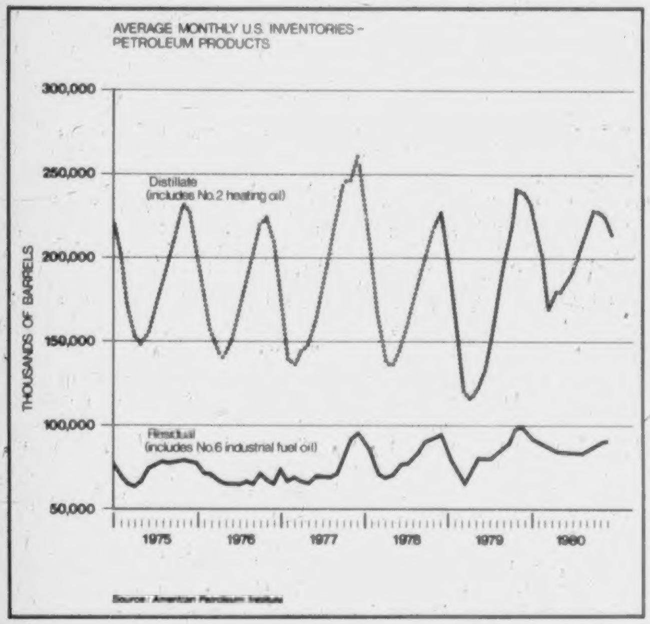
What Factors Influence Heating Oil Futures Prices

Commodity futures trading represents the nearest approach in our economy to the ideal of a pure, competitive free market. Futures contracts are traded in open, organized auction markets. Prices are ultimately determined by the relationships of supply and demand. Fluctuations in price result from fundamental factors, i.e., abundant supply, excessive demand, discovery, sudden availability of new sources, or weather conditions, to cite a few.

Like its cash market counterpart, heating oil futures are significantly affected by the following three factors: weather, inventories, and government.

Unpredictable weather has probably been the single most important factor in making heating oil a viable futures contract. For example, the 1979–80 winter was unseasonably warm. Before winter, government officials had put pressure on oil companies to increase

CHART I



Source: American Petroleum Institute

supplies. The combined impact of the warmer-than-usual winter and high heating oil stocks caused prices to drop despite OPEC's price increases for crude. These circumstances established that those who assumed heating oil prices could only rise were wrong. In contrast, the 1980–81 winter has been extremely cold, with prices strong and stocks being drawn down (albeit at a slower rate than equally cold winters experienced). Thus, weather's effect on consumption is critical to price movement.

Oil products are storable commodities. However, oil storage capacity is equivalent to a small percent of consumption. The majority of this storage space is required to insure a steady flow of product into the market. There is relatively little storage space available for long-term holding. The oil industry must transport crude to the refineries and subsequently the petroleum products to the distributing outlets and finally to the ultimate consumer. Thus, a glut of product in the consuming areas can back up the whole production chain.

International developments and governmental factors which affect energy policies such as domestic economic policy, Federal Reserve actions, OPEC decisions, Middle East problems, and other areas of international tension, all have an impact on prices.

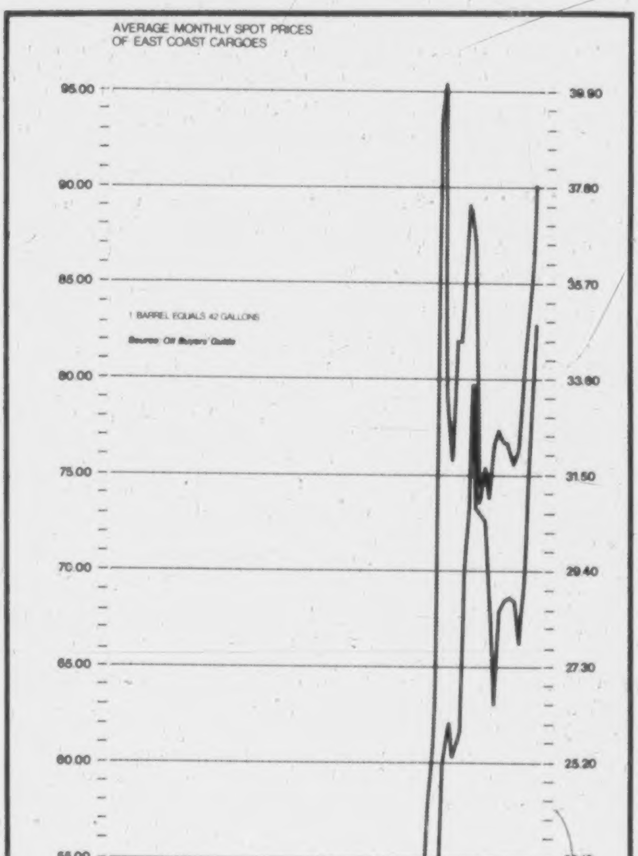
Oil traders and analysts must keep a close watch on world events. Given the time lag of the production cycle and the seasonality of consumption, the timing of events often tends to temper or exacerbate market response.

Market Participants

The volatility of petroleum products prices obviously creates a high degree of risk to producers, merchants, and consumers of petroleum products. The New York Heating Oil Contract is being increasingly utilized for hedging purposes by the trade. Commitments of Traders reports published by the Commodity Futures Trading Commission show that hedgers account for a significant portion of market participants.

Due to the nature of the market, there are many firms which are subject to price risk at virtually every stage of the production/distribution chain. The most active participants in the futures market to date have been the oil traders, distributors and jobbers who

CHART II



Source: Oil Buyers' Guide

operate in the New York spot market. Small independent refiners and a few of the large refineries have also utilized the market for price protection since rising crude costs do not always make their way into product prices, especially in periods of weak product demand and/or high inventories.

However, it is the middle layer of distribution which has been the most vulnerable to price movement. Because these traders generally buy the product and then store it temporarily before reselling it, they can be affected adversely by price increases or decreases. Moreover, since the demand for heating oil is seasonal, ready availability during high demand periods requires that fuel oil suppliers build up storage quantities in summer to insure adequate supplies for winter. These distributors are vulnerable to short-term price fluctuations and shortages of supply. Heating oil futures help these distributors shift some of their risks and thus protect themselves against unanticipated changes in supply and demand.

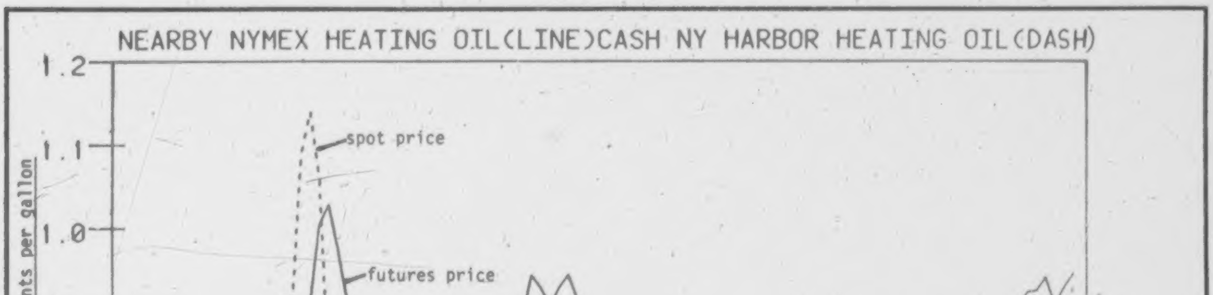
Futures prices for heating oil have had an excellent record of "tracking" New York cash market prices, as is evident in Chart III below. This factor is primary in establishing a hedging basis, and is the key to the growing acceptance of the futures contract by the industry. Pricing of New York heating oil has also proven effective for hedging other petroleum products, such as diesel, jet fuel and kerosene. Industry response and inquiry from large consumers, including trucking companies and public utilities, is strong and growing.

Further, oil traders in other areas have been able to hedge market activities by determining their basis relative to New York prices. For example, Chart IV on page 31 plots spot prices in Baltimore versus New York and reflects a relatively stable relationship between the two. Thus, traders in Baltimore can hedge in the New York futures market with a minimal basis risk.

Speculators are increasingly taking note of the heating oil futures market. With the growth in open interest and trading volume, there is sufficient liquidity in the market to permit easy entry and exit. Support from the major commission houses and their research staffs provides the public with the essential information required to make carefully considered market judgments. In addition, world and domestic oil market developments are usually covered by the news media. Thus, increased speculative activity by informed traders should make a strong contribution to the continued growth of this market.

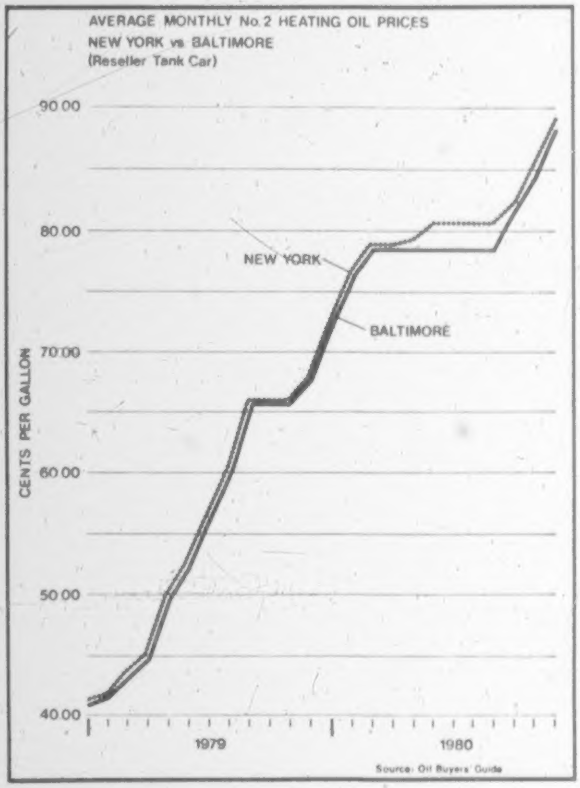
The existence of a viable futures market for petroleum products provides the international petroleum industry, governmental authorities, and the general public with a reliable gauge of the economic values for petroleum products. The 1,000 barrel contract unit permits the small petroleum refiner, distributor or consumer, to have the same access to the market

CHART III



CASH PRICES: PLATT'S OILGRAM

CHART IV



and pricing information as the multinational petroleum corporation.

Sources of Information

Traders of heating oil, both hedge and speculative participants, benefit from a wealth of information. Aside from the regular data released by the Department of Energy (DOE) and the American Petroleum Institute (API) in Washington, D.C., there is rarely a day that some aspect of the oil market is not covered in the news. Generally, most newspapers and electronic media pay close attention to developments in the oil industry. In addition, for hedgers and speculators, there are numerous trade publications which evaluate the impact of political, legal, economic and social developments on the oil market.

The following is a list of sources of cash market information including price information, on petroleum products:

1. *Oil Daily*, Oil Daily Inc., New York, NY
2. *Platt's Oilgram Price Service*, McGraw-Hill, New York, NY
3. *Energy User News*, Fairchild Publications, New York, NY
4. *Fuel Oil Week*, Observer Publishing Co., Washington, DC
5. *Oil Buyers' Guide*, Petroleum Publications, Inc., Lakewood, NJ
6. *The Oil and Gas Journal*, Petroleum Publishing Co., Tulsa, OK
7. *The Petroleum Intelligence Weekly*, Petroleum & Energy Intelligence Weekly, Inc., New York, NY
8. *National Petroleum News*, McGraw-Hill, New York, NY

Daily cash prices may be found in the *Oil Buyers' Guide* and *Platt's Oilgram Price Service*. The latter publication is widely read and is said to daily reach the desk of every major petroleum industry executive throughout the world. The prices quoted for petroleum products in these two publications are regularly used in the petroleum industry as a basis of determining contractual prices for producers, merchants or consumers. Both publications regularly quote the New York Mercantile Exchange New York harbor heating oil futures prices.

New Energy Contracts Proposed

The Exchange is expected to introduce a Gulf Coast Heating Oil contract in 1981. The Gulf Coast is the primary U.S. refining center, providing the major portion of petroleum products shipped to the Midwest and Northeast. As such, it is also a major trading center with a wide range of market participants. The major oil companies, independents and numerous oil trading firms are active in the Gulf Coast and New York market, buying and selling as opportunity allows or as need directs.

Trading essentially the same product at Gulf Coast point of origin versus the New York consumption point provides no guarantee that Gulf Coast prices will be lower than in New York. There are times when supply/demand balances are changing rapidly, leading to Gulf Coast prices at par with or higher than New York prices. This situation can lead to negative returns for those firms committed to buying in the Gulf Coast for sale in New York. Oil traders typically arbitrage between New York and the Gulf Coast cash markets, and the introduction of a Gulf Coast futures delivery will complement their hedging ability on the New York futures contract.

The opening of the International Petroleum Exchange (IPE) in London on April 6, 1981 is expected to provide opportunities for international arbitrage. The IPE will trade gas oil, which is the European counterpart of domestic heating oil. Delivery points will be Amsterdam, Rotterdam and Antwerp. The London market should complement the New York contract by providing a pricing basis for international oil trading.

The Exchange is also awaiting approval by the CFTC of contracts for leaded and unleaded regular gasoline. Futures contracts for gasoline would provide the industry with a mechanism to directly hedge themselves in the volatile gasoline market. The proposal calls for New York Harbor delivery and CFTC approval is anticipated in the fall of 1981.

Conclusion

The heating oil market is ideal for futures trading. Heating oil prices are extremely volatile, responding to numerous influences which include weather, seasonal factors, political and economic developments. Prices have been particularly volatile in recent years because of uncertainties about crude supplies, the decontrol of U.S. oil prices, and the discovery that demand is more elastic than previously thought. There are many participants in the distribution chain for heating oil who are subject to risk due to the possibility of adverse price moves. Thus trade hedge interest in the contract is likely to continue its strong growth pattern. For speculators, the heating oil futures contract offers opportunities for profit in a market which is constantly in the news.

TRADING INTEREST RATES FUTURES TIME CURVES

BY JACOB GROSSMAN AND STANLEY R. JONAS

Introduction

The market for interest rates futures offers a unique opportunity to trade or arbitrage expected future *short-term* interest rates. While expected short-term rates are *explicit* on Treasury bill (T-bill) futures, they are *implicit* in the prices of Treasury bond (T-bond) and gold futures. The purpose of this article is to explain some trading strategies for arbitraging expected future short-term rates implied in T-bond, T-bill, and gold futures prices.

T-Bill Futures Rates

Table 1 reports the settlement prices on the International Monetary Market (I.M.M.) 90-day T-bill, Chicago Board of Trade (C.B.O.T.) 20-year T-bond and COMEX gold futures on March 27, 1981. The discount rates on T-bill futures can be easily obtained from T-bill futures prices as follows:

$$\text{(1)}\quad \text{Discount Rate} = 100 - \text{I.M.M. Index price}$$

Accordingly, the T-bill discount rate which corresponds to the June 1981 price of 88.11 is 11.89%, the discount rate of the September 1981 price of 88.72 is 11.28%, and so on. Column 1 of Table 2 lists the T-bill discount rates for the T-bill futures prices listed for that date.

Yields of different financial instruments are made comparable in the money market by restating yields quoted on a discount basis—the basis on which T-bills are quoted—in terms of either equivalent "repo" (RP)[1] yield or bond yield—the basis on which yields on other money market instruments or notes and bonds are quoted. For our purposes, it will be more useful to convert the discount rate to a "repo equivalent." (A "repo" or Repurchase agreement is the basic method of financing inventories of government securities.) This can be done by a simple formula:

$$\text{(2)}\quad \begin{array}{l}\text{Repo Equivalent } (d') \\ \text{(of T-bill discount rate)}\end{array} = \frac{360 \times d}{360 - (d \times t)}\,.$$

where d is the discount rate and t is the maturity of the bill (91 days). The repo rate is the simple 360-day interest rate. For example, the repo equivalent of the June '81 T-bill discount rate of 11.89 is:

$$\text{(3)}\quad d' = \frac{360 \times .1189}{360 - (.1189 \times 91)} = 12.26\%\,.$$

The Repo Equivalent of T-bill futures discount rates are listed in column 2 of Table 2.

The quoted rates on T-bill futures can be viewed as the interest rates the market expects to prevail on 3-month Treasury bills in the corresponding futures months. For instance, the June 1981 rate of 12.26% is the Repo Equivalent interest rate that is expected to prevail in June 1981 on a 3-month Treasury bill, and so on.

T-Bond Futures Spreads

Prices on the C.B.O.T. T-bond futures contracts are computed on a hypothetical T-bond with 8% coupon and 20 years to maturity. Each T-bond futures price corresponds to a long-term yield. For instance, the long-term yield on the June '81 T-bond futures price of 65.17 (Table 1) is 12.82%.

However, since the underlying T-bond can be purchased, held and then delivered against a short position in the futures market, successive price *differences* of T-bond futures (bond spreads) *imply* expected future short-term rates. This 3-month implied rate, known as Implied RP (IRP), can be reasonably approximated by the following formula:

$$\text{(4)}\quad \text{IRP} = \frac{8}{P_1}\left(\frac{360}{365}\right) + \left(\frac{P_2 - P_1}{P_1}\right)\frac{360}{T}\,.$$

where P_1 and P_2 are the prices of the nearby and the deferred contracts, respectively, and T is the duration

TABLE 1
Settlement Prices of Treasury Bill, Treasury Bond and Gold Futures on March 27, 1981

Year	Month	T-Bill (I.M.M. Index)	T-Bond (in 32nd)	Year	Month	Gold (in $)
1981	June (M)*	88.11	65–17	1981	June (M)	542.50
	September(U)	88.72	66–2		August (Q)	554.40
	December (Z)	88.82	66–13		October (V)	568.30
					December (Z)	581.20
1982	March (H)	88.76	66–22	1982	February (G2)	594.10
	June (M2)	88.68	66–29		April (J2)	607.00
	September (U2)	88.59	67–1		June (M2)	619.90
	December (Z2)	88.52	67–4		August (Q2)	632.90
					October (V2)	645.90
1983	March (H2)	—	67–7		December (Z2)	659.00

* The capital letter in parenthesis next to the month is the common commodity futures market symbol for the calendar month. The number next to the letter represents the same month in the following year.

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[1] The RP (or the repo) rate is the interest rate on repurchase agreements in which government securities are sold for Federal Funds and at the same time the seller of the securities agrees to repurchase them later at a slightly higher price. The buyer of the securities is making a one-day loan secured by the government obligations sold to him. The difference between the purchase and sale prices on the RP transaction is the interest that the investor is earning on his loans.

of the spread. (Note that T-bonds are quoted for a 365-day year, T-bills for a 360-day year, also that 8 in equation (4) represents 8%, the standard deliverable coupon rate on C.B.O.T. T-bonds). For example, consider the June and September 1981 T-bond futures prices of 65–17 and 66–02. Substituting these prices in equation (4) and with T = 91 days, we get:

$$(5) \qquad IRP = \frac{8}{65.53125}\left(\frac{360}{365}\right) + \left(\frac{66.0625 - 65.53125}{65.53125}\right)\frac{360}{91} = 15.25\%$$

(Note that a T-bond price of 65–17/32 is equal to 65.53125 and a price of 66–02/32 is equal to 66.0625). Thus, the June '81/September '81 bond spread predicted (on March 27, 1981) that the 3-month interest rate (collaterized by Government bonds, the RP rate) would be 15.25% in June 1981. Similarly, the Implied RP in the September '81/December '81 bond spread is 14.00%. The resulting Implied RPs, derived from the listed T-bond spreads, are reported in column 3 of Table 2.

Gold Spreads

In the same way that bond spreads imply expected future short-term rates, gold spreads also imply future short term interest rates. For instance, the settlement prices of June 1981 and October 1981 COMEX gold futures contracts on March 27, 1981 were \$542.50 and \$568.30, respectively (see Table 1). Again, since the gold can be purchased in June at \$542.50 an ounce and redelivered in October at the price of \$568.30 an ounce, the two prices imply an expected short term rate, the Implied Rate in Gold spreads (IRG), which is computed as follows:

$$(6) \qquad IRG = \frac{P_2 - P_1 - \text{storage and insurance cost}}{P_1}\left(\frac{360}{T}\right),$$

where, as before, P_1 is the price of the nearby contract, P_2 is the price of the deferred contract, and T is the duration of the spread. The only difference between equation (4), the Implied RP in bond spreads, and equation (6) is that the T-bond has a positive coupon, the $\frac{8}{P_1}\left(\frac{360}{365}\right)$ term in (4), while the coupon on the gold is negative because of storage and insurance costs. If we substitute the above prices in equation (6) for T = 122 days (4 months) and use a storage and insurance cost of \$5 per month, a recent rate, per contract of 100 ounces (\$0.20 per oz. for 4 months), we get:

$$(7) \qquad IRG = \frac{568.30 - 542.50 - .20}{542.50} \times \frac{360}{122} = 13.92\%.$$

Thus, the June '81/Oct. '81 gold spread predicts that the 4-month interest rate (collaterized by gold) in June '81 will be 13.92%. The implied interest rate in gold spreads for the period August '81/December '81 is 13.82%, and so on. The implied rates in gold spreads are reported in column 4 of Table 2.

Futures Time Curves

Chart 1 plots the T-bill futures rates (repo equivalent) and the implied rates in T-bond spreads and gold spreads listed in Table 2. The gold spreads do not cover exactly the same months as the T-bond spreads and the T-bills. The gold spreads are 4-month spreads, while the bond spreads and T-bills cover a period of 3 months. Nevertheless, we matched the gold spreads with the bond spreads and the T-bill rate. Thus, for example, the June '81/October '81 gold spread is matched with the June '81/Sept. '81 bond spread and the June '81 T-bill. The Aug. '81/Dec. '81 gold spread is matched with the Sept. '81/Dec. '81 bond spread and the Sept. '81 T-bill, and so on. Since the difference between a 3- and a 4-month rate is usually small, this procedure is likely to result in only relatively minor distortions.

We call the resulting curves "Futures Time-Curves" because they portray rates which are expected to prevail at future dates for a given instrument with constant maturity (3 or 4 months[2]).

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[2] A "time curve" is different from a "yield curve." The latter plots rates for different maturities at a point in time, while the former plots rates for a given maturity at different points in time in the future. However, a yield curve for a future date ("futures yield curve") can be easily derived from a "time curve."

TABLE 2

Expected Future Short-Term Rates on T-Bill, Bond Spreads and Gold Spreads on March 27, 1981
(In Percent)

		T-Bill		T-Bond Spread	Gold Spread	
		1 Discount Rate	2 Repo-Equivalent	3 Implied RP	4 Implied Rate	
1981	June	11.89	12.26	15.25	June 81/Oct. 81	13.92
	Sept.	11.28	11.61	14.00	Aug. 81/Dec. 81	13.82
	Dec.	11.18	11.50	13.56	Dec. 81/Apr. 82	13.10
1982	March	11.24	11.56	13.13	Feb. 82/June 82	12.92
	June	11.32	11.65	12.53	June 82/Oct. 82	12.07
	Sept.	11.41	11.74	12.32	Aug. 82/Dec. 82	12.17
	Dec.	11.48	11.82	12.30		

Table 3 lists the differences between the Implied RPs in the T-bond futures spreads and the T-bill futures rates (column 1), between the implied interest rates in gold spreads and the T-bill futures rates (column 2), and between the implied rates in bond spreads and gold spreads (column 3).

It should first be noted that while the interest rate implied in bond spreads and gold spreads and the T-bill rate represent different instruments—most importantly, the T-bill rate is a government rate and the other two rates are private money market rates—they are essentially similar rates with approximately the same maturity. The Implied RP in bond spreads is secured by a Government bond and the implied rate in gold spreads is collaterized by gold. Evidence suggests that the respective rates tend to move within a "normal" range in relation to each other and that any significant deviation from this range is temporary. The reason for this is: if the spread between the two rates is "too wide," investors and arbitrageurs would sell the instrument with the low rate and buy the instrument with the high rate. For example, if the T-bill rate is "too low" relative to the other rates, the T-bill would be sold and the money would be lent in the RP or the gold market, which offer higher rates. This operation would persist until the two rates are back "in line."

It is clear from Chart 1 on page 36 and Table 3 that on March 27, 1981 the markets predicted markedly different spreads between the implied rates in T-bond and gold spreads and T-bill rates in futures months. The spreads between the various futures rates tend to be wide in the nearby months and to narrow considerably in the deferred months. Further, the slopes of the time curves are quite different. For instance, the slope of the T-bill time curve is (mildly) upward sloping from December 1981, while the slope of the T-bond time curve is (sharply) downward sloping. In other words, the T-bill futures market is saying that short rates will be rising from December 1981 on, while the T-bond futures market is implying that short rates will continue to decline until September 1982. The slope of the gold time curve is generally similar to the slope of the T-bond time curve in that both are negatively sloped, though some segments of the two curves portray significant differences. This structure of the futures time curves provides several trading strategies that will be discussed in the following sections.

Trading Futures Time Curves

Bond Spreads Versus T-Bills

Consider the difference between the Implied RP in the June '82/Sept. '82 bond spread and the June '82 T-bill futures of 88 basis points. Empirical evidence suggests that this difference is "too wide." As a result, one might expect the spread to narrow, that is, the implied RP in the bond spread will decline relative to the T-bill rate. This strategy can be executed by selling June '82 T-bills and buying the June '82/Sept. '82 T-bond spread in the appropriate numbers (e.g. buying June '82 T-bonds and selling Sept. '82 T-bonds). There is one caveat: a "tail"[3] must be applied to the bond spread. For example, the trade position may look as follows on March 27, 1981:

T-Bill Position	*T-Bond Position*	
Short	Long	long the spread
June '82 T-bills	June '82 T-bond	
at 11.65% (repo	Short	
equivalent)	Sept. '82 T-bond	
	Plus a tail	
	At an Implied RP of 12.53%	

It must be emphasized that the appropriate ratios (i.e. the amount of bills, the bond spreads and the tail) are dependent on the futures bond price level, the magnitude and duration of the bond spread, and the Implied RP.

Bond Spreads Condor[4] Versus T-Bill Spread

As noted earlier, while the slope of the T-bill time curve is flat to upward rising, the slope of the T-bond time curve is downward sloping. This inconsistent structure can be adjusted by the T-bill curve inverting and/or the T-bond time curve flattening. More specifically, consider the difference between the bond spread Implied RP and the T-bill futures rates in September 1981 and September 1982 of 239 basis points and 58 basis points, respectively. The respective slopes will assume a more consistent structure if

TABLE 3

Differences Between Implied Rates in Bond Spreads and Gold Spreads and T-Bill Futures Rates*
(repo equivalent basis points, March 27, 1981)

		1 Implied RPs in Bond Spreads Minus T-Bill Rates	2 Implied Rates In Gold Spreads Minus T-Bill Rates	3 Implied Rate In Gold Spreads Minus Implied RPs in Bond Spreads
1981	June	299	166	−133
	Sept.	239	221	−18
	Dec.	206	160	−46
1982	March	157	136	−21
	June	88	42	−46
	Sept.	58	43	−15
	Dec.	48	—	—

* See Table 1 and 2.

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[3] The extra contracts which neutralize the effect of a changing price level on the Implied RP.

[4] Two related spreads which are not contiguous, as opposed to a "butterfly" in which the two spreads share a common "leg."

the former difference will narrow *relative* to the latter difference. Given this expectation, the following "condor spread" could be taken (on March 27, 1981):

T-Bill Position	*T-Bond Position*	
Short	Long	
Sept. '81 T-Bills	Sept. '81 T-bonds	long
at 11.61% (repo	Short	the
equivalent)	Dec. '81 T-bonds	spread
	Plus a tail	
	At an Implied RP of 14.00%	
	AND	
Long	Short	
Sept. '82 T-Bills	Sept. '82 T-bond	short
at 11.74% (repo	Long	the
equivalent)	Dec. '82 T-bond	spread
	Plus a tail	
	At an Implied RP of 12.32%	

Gold Spreads Versus T-Bills

We have shown earlier that for the June 1982 futures contract, the Implied RP in the bond spreads was high relative to the T-bill rate. It is interesting now to examine the relationship between the implied rate in the gold spread and the T-bill rate. As reported in Table 3, the difference between the implied rate in the June '82/Oct. '82 gold spread and the June '82 T-bill is 42 basis points. It can be empirically established that the implied rate in the gold spread is *low* relative to the T-bill rate. (This is opposite to the previous case in which the Implied RP in the bond spread was high relative to the T-bill rate). Thus, one would expect the implied rate in the gold spread to rise relative to the T-bill rate. Advantage of this can be achieved by the following trade position (on March 27, 1981):

T-Bill Position	*Gold Position*	
Long	Short	
June '82 T-bills	June '82 Gold	long the
at 11.65% Repo	Long	spread
Equivalent	Oct. '82 Gold	
	Plus a tail	
	At an Implied rate of 12.07%	

Again, the precise ratios will depend on the gold futures price level, the magnitude and duration of the gold spread, and the implied rate in the gold spread.

Note that in gold futures terminology, one is said to be "long the spread" if one is short the nearby contract and long the deferred contract. This is the opposite terminology to the one prevailing in T-bond (and T-bill) futures. The reason for the difference might be that a "long spread" is normally associated with a "bull spread." In a bull market, the deferred contract in gold futures will normally gain in price relative to the nearby contract, whereas in T-bond futures the nearby contract will normally gain in price relative to the deferred contract.

Gold Spreads Versus Bond Spreads

We have discussed arbitraging the implied rate in gold spreads against the T-bill rate and the Implied RP in bond spreads against the T-bill rate. The T-bill rate served as a "numeraire"—the common unit against which other implied rates were judged. We have shown that the Implied RP in the June '82/Sept. '82 bond spread was *high* relative to the June '82 T-bill rate, and that the implied rate in the June '82/Oct. '82 gold spread was *low* relative to the June '82 T-bill rate. It follows that the Implied RP in the June '82/Sept. '82 T-bond spread is high *relative* to the implied rate in the June '82/Oct. '82 gold spread. This can be clearly seen by considering the following: (a.) bond spread is high relative to the T-bill rate. (b.) T-bill rate is high relative to the gold spread. Therefore, bond spread is high relative to gold spread. The T-bill rate is simply "netted out."

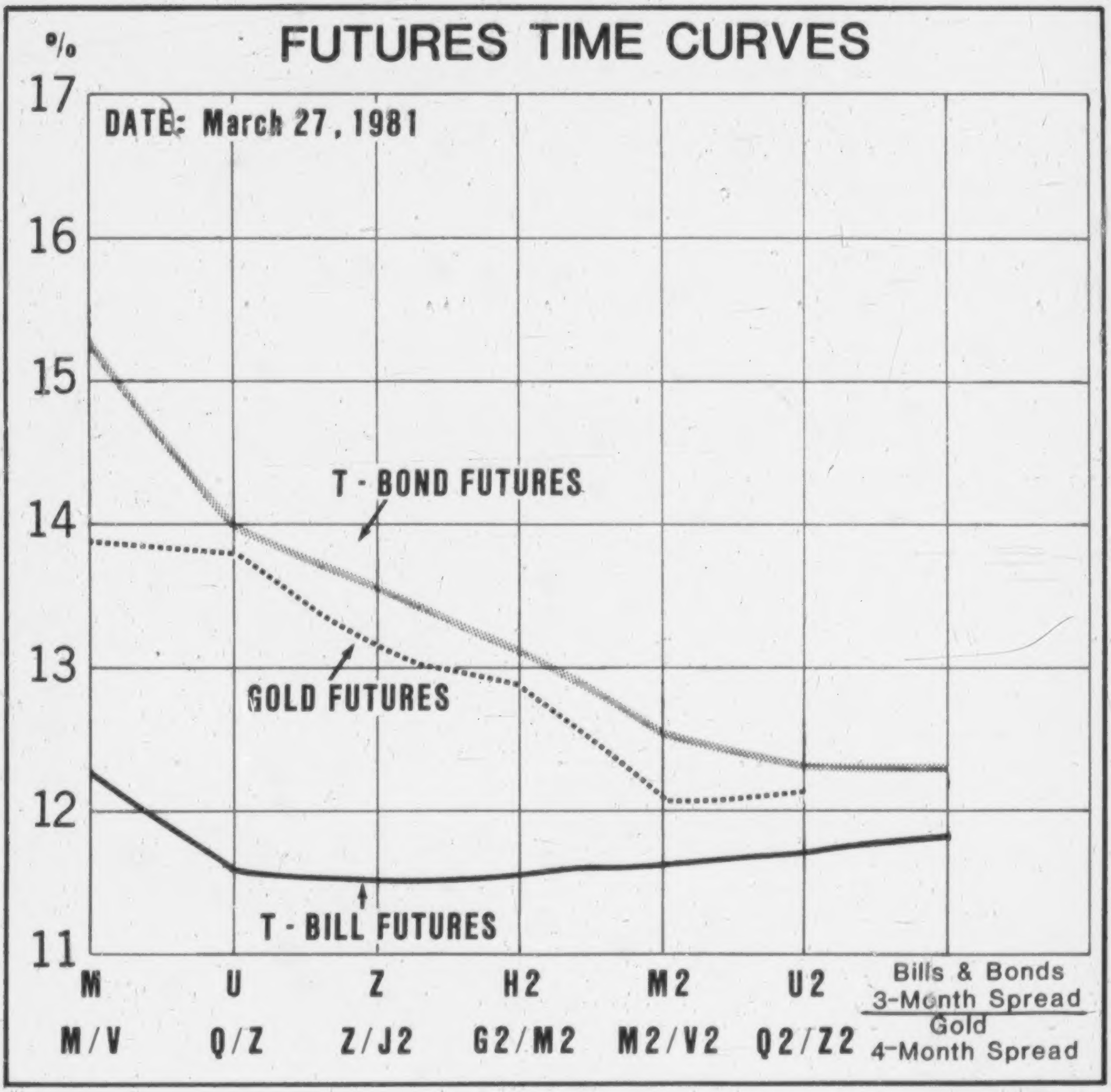
Similarly, the trading position will be the difference between the gold spread versus the T-bill trade, and the bond spread versus the T-bill trade. The resulting gold spread/bond spread trading position is as follows (on March 27, 1981):

Gold Position		*T-Bond Position*	
Short		Long	
June '82 Gold	long	June '82 T-bond	long
Long	the	Short	the
Oct. '82 Gold	spread	Sept. '82 T-bond	spread
Plus a tail		Plus a tail	
At an implied rate 12.07%		At an Implied RP of 12.53%	

As before, the particular ratios depend on the price level of gold and bond futures, the magnitude and duration of the gold and bond spreads, and the implied interest rates in the respective spreads.

Conclusion

The interest rate futures market, like other futures markets, offers a relatively inexpensive way to hedge against risk and generate information on expected prices. It also provides a novel and previously nonexistent way to arbitrage expected future short-term rates—an operation that would not be practical to carry out in the cash market. To the extent that the arbitrage among expected future rates spills over—via futures—to the cash market, the efficiency of the latter is increasing as well. We have outlined some trading strategies. There are clearly others.


FUTURES TIME CURVES
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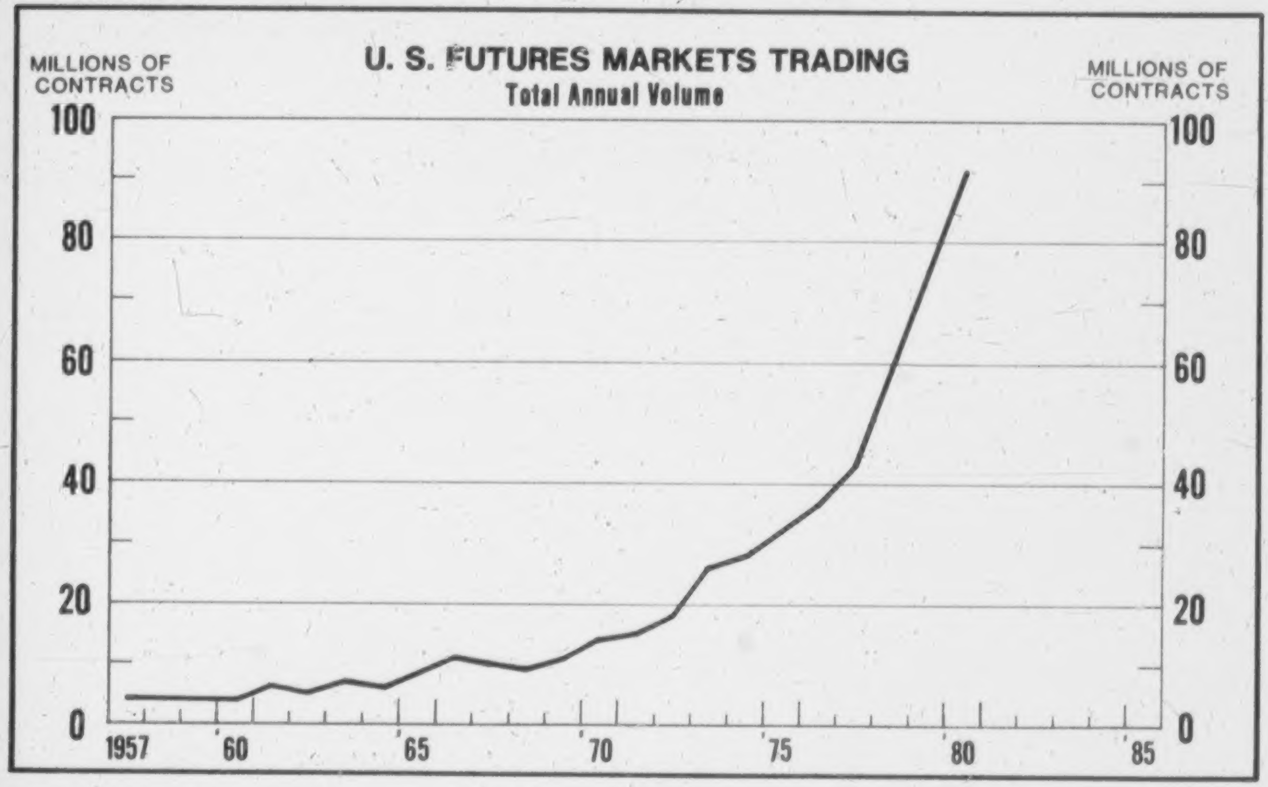
Bills & Bonds
3-Month Spread
Gold
4-Month Spread

TRADING ACTIVITY ON THE COMMODITY FUTURES MARKETS



U. S. FUTURES MARKETS TRADING

Total Annual Volume

Volume Highlights 1980 and Comparison with 1979

1980 Rank	Exchange	1980 Contracts	1980 %	1979 Contracts	1979 %	1979 Rank
1.	Chicago Board of Trade (CBoT)	45,281,571	49.18	33,870,680	44.59	(1)
2.	Chicago Mercantile Exchange (CME)	22,261,295	24.17	19,930,798	26.24	(2)
3.	Commodity Exchange, Inc. (COMEX)	11,009,389	11.95	12,952,353	17.05	(3)
4.	Coffee, Sugar & Cocoa Exchange (CSC)	4,886,416	5.31	2,510,179	3.30	(5)
5.	MidAmerica Commodity Exchange (MIDAM)	2,993,636	3.25	2,568,950	3.38	(4)
6.	New York Cotton Exchange (NYCE)	2,653,294	2.88	1,875,126	2.47	(6)
7.	Kansas City Board of Trade (KCBoT)	1,298,047	1.41	1,037,018	1.37	(7)
8.	New York Mercantile Exchange (NYME)	1,154,095	1.25	828,249	1.09	(8)
9.	Minneapolis Grain Exchange (MGE)	360,978	.39	328,799	.43	(9)
10.	New York Futures Exchange (NYFE)	183,993	.20	—	—	—
11.	American Commodity Exchange (ACE)	12,585	.01	64,319	.08	(10)
	TOTAL	92,096,109	100.00	75,966,471	100.00	

Rank	Commodity Group	Contracts	%	Contracts	%	Rank
1.	Grains	20,349,023	22.1	14,534,603	19.1	(3)
2.	Soybean Complex	19,207,489	20.9	15,808,411	20.8	(2)
3.	Precious Metals	13,171,816	14.3	18,163,696	24.0	(1)
4.	Financial Instruments	12,469,878	13.5	5,607,005	7.4	(5)
5.	Livestock & Products and Poultry	11,639,519	12.6	11,902,203	15.7	(4)
6.	Imported Agric. Commodities[1]	4,886,416	5.3	2,510,179	3.3	(6)
7.	Foreign Currency	4,222,820	4.6	2,222,978	2.9	(8)
8.	Other Agric. Commodities[2]	3,052,307	3.3	2,081,287	2.7	(9)
9.	Non-Precious Metals	1,848,108	2.0	2,301,108	3.0	(7)
10.	Lumber Products	1,010,424	1.1	801,107	1.1	(10)
11.	Petroleum Products	238,309	0.3	33,894	—	(11)
	TOTAL	92,096,109	100.00	75,966,471	100.00	

[1] Excludes imported beef. [2] Cotton, orange juice, potatoes & eggs. *Source: Futures Industry Association*

Volume Highlights 1980 and Comparison with 1979

1980 Rank	Contracts with Volume Over 100,000	1980		1979		1979 Rank
		Contracts	%	Contracts	%	
1.	Corn, CBoT	11,946,975	12.97	8,671,719	11.42	(2)
2.	Soybeans, CBoT	11,768,197	12.78	9,114,348	12.00	(1)
3.	Gold, COMEX	8,001,410	8.69	6,541,893	8.61	(4)
4.	T-Bonds, CBoT	6,489,555	7.05	2,059,594	2.71	(12)
5.	Live Cattle, CME	5,997,047	6.51	7,214,848	9.50	(3)
6.	Wheat, CBoT	5,428,160	5.89	3,575,395	4.71	(6)
7.	Sugar #11, CSC	3,576,662	3.88	1,792,723	2.36	(15)
8.	T-Bills (90-day) CME	3,338,773	3.63	1,930,482	2.54	(13)
9.	Soybean Meal, CBoT	3,218,690	3.49	2,647,821	3.49	(10)
10.	Soybean Oil, CBoT	3,167,895	3.44	3,081,646	4.06	(8)
11.	Gold, CME	2,543,419	2.76	3,558,960	4.68	(7)
12.	Cotton #2, NYCE	2,490,405	2.70	1,689,051	2.22	(16)
13.	GNMA Mrtges, CDR, CBoT	2,325,892	2.53	1,371,078	1.80	(18)
14.	Pork Bellies, Fzn, CME	2,250,945	2.44	1,514,176	1.99	(17)
15.	Live Hogs, CME	2,153,767	2.34	1,805,710	2.38	(14)
16.	Copper, COMEX	1,848,080	2.01	2,301,033	3.03	(11)
17.	Wheat, KCBoT	1,297,757	1.41	1,037,018	1.37	(19)
18.	British Pound, CME	1,263.750	1.37	513,682	.68	(24)
19.	Silver, COMEX	1,058,734	1.15	4,080,619	5.37	(5)
20.	Soybeans, MIDAM	1,052,707	1.14	964,596	1.27	(21)
21.	Deutschemark, CME	922,608	1.00	450,856	.59	(26)
22.	Coffee "C", CSC	906,944	.98	449,799	.59	(27)
23.	Feeder Cattle, CME	874,313	.95	980,619	1.29	(20)
24.	Lumber, CME	838,676	.91	649,478	.85	(22)
25.	Swiss Franc, CME	827,884	.90	493,944	.65	(25)
26.	Canadian Dollar, CME	601,925	.65	399,885	.53	(28)
27.	Japanese Yen, CME	575,073	.62	329,645	.43	(31)
28.	Wheat, MIDAM	550,950	.60	379,975	.50	(29)
29.	Gold, MIDAM	447,494	.49	200,359	.26	(37)
30.	Corn, MIDAM	440,615	.49	323,808	.43	(33)
31.	Platinum, NYME	429,708	.47	536,124	.71	(23)
32.	Potatoes, NYME	393,759	.43	183,868	.24	(39)
33.	Cocoa, CSC	388,971	.42	232,183	.31	(34)
34.	Silver, CBoT	341,033	.37	2,720,589	3.58	(9)
35.	Wheat, MGE	333,610	.36	328,799	.43	(32)
36.	Oats, CBoT	320,934	.35	215,928	.28	(35)
37.	No. 2 Heating Oil, NYME	238,284	.26	33,804	—	—
38.	Silver, MIDAM	209,494	.23	361,576	.48	(30)
39.	Live Cattle, MIDAM	186,831	.20	208,997	.28	(36)
40.	Plywood, CBoT	169,550	.18	146,570	.19	(40)
41.	Orange Juice, NYCE	162,864	.18	186,018	.24	(38)
42.	T-Bonds, NYFE	139,410	.15	—	—	—
43.	Live Hogs, MIDAM	103,181	.11	127,674	.17	(41)
	Contracts with Volume Under 100,000 Contracts	473,178	.52	559,581	.78	
	TOTAL	92,096,109	100.00	75,966,471	100.00	

Source: Futures Industry Association

Commodity Futures Contracts Traded 1976–1980

Chicago Bd. of Trade	Contract Unit	1980	1979	1978	1977	1976
Wheat	5,000 bu	5,428,160	3,575,395	2,556,134	1,820,790	2,973,733
Corn	5,000 bu	11,946,975	8,671,719	6,127,099	5,021,827	4,609,262
Oats	5,000 bu	320,934	215,928	215,774	109,970	126,885
Soybeans	5,000 bu	11,768,197	9,114,348	8,477,277	7,996,139	5,474,179
Soybean Oil	60,000 lb	3,167,895	3,081,646	2,909,284	2,535,046	1,685,819
Soybean Meal	100 tons	3,218.690	2,647,821	2,493,086	2,373,453	1,523,711
Iced Broilers	30,000 lb	4,079	25,681	74,684	64,938	117,641
Silver	5,000 oz	341,033	2,720,589	2,657,833	2,257,059	2,011,041
Gold	3 Kg	78	12,844	56,470	13.758	10,940
Gold	100 oz	71,401	97,509	—	—	—
Plywood	76,032 sqft	169,550	146,570	261,483	368,770	233,373
GNMA Mrtges, CD	$100,000	12,619	77,365	6,527	—	—
GNMA Mrtges, CDR	$100,000	2,235,892	1,371,078	953,161	422,421	128,568
Com. Paper (90-day)	$1,000,000	15,996	39,702	18,767	3,553	—
Com. Paper (30-day)	$3,000,000	67	1,292	—	—	—
T-Notes (4-6 year)	$100,000	450	11,599	—	—	—
T-Bonds	$100,000	6,489,555	2,059,594	555,350	32,101	—
TOTAL		45,281,571	33,870,680	27,362,929	23,019,825	18,895,156
Mid-America Commodity Exchange						
Wheat	1,000 bu	550,950	379,975	205,629	151,433	514,038
Corn	1,000 bu	440,615	323,808	256,022	280,268	418,715
Oats	5,000 bu	2,364	1,961	1,423	1,172	2,904
Soybeans	1,000 bu	1,052,707	964,596	994,932	1,104,763	700,466
Silver	1,000 oz	209,494	361,576	378,049	366,585	477,513
Gold	33.2 oz	477,494	200,359	41,939	—	—
Live Cattle	20,000 lb	186,831	208,997	54,054	—	—
Live Hogs	15,000 lb	103,181	127,674	185,927	159,324	145,647
TOTAL		2,993,636	2,568,950	2,121,189	2,066,195	2,231,866
Kansas City Bd. of Trade						
Wheat	5,000 bu	1,297,757	1,037,018	755,949	617,122	687,811
Grain Sorghum	5,000 bu	290	—	—	15	—
TOTAL		1,298,047	1,037,018	755,949	617,137	688,350
Minneapolis Grain Exchange						
Wheat	5,000 bu	333,610	328,799	284,313	191,098	228,084
Sunflower Seeds	100,000 lb	27,368	—	—	—	—
TOTAL		360,978	328,799	284,313	191,134	228,555
Chicago Mercantile Exchange						
Fresh Eggs	22,500 dz	2,798	21,224	72,984	130,042	146,341
Potatoes	80,000 lb	2,481	1,126	90	4,727	1,889
Live Hogs	30,000 lb	2,153,767	1,805,710	1,765,201	1,307,712	1,146,815
Pork Bellies, Fzn	38,000 lb	2,250,945	1,514,176	1,439,651	1,358,730	1,201,066
Live Cattle	40,000 lb	5,997,047	1,214,848	5,592,364	2,639,517	2,647,700
Feeder Cattle	42,000 lb	874,313	980,619	568,728	133,274	62,795
Broilers	30,000 lb	45,237	7,794	—	—	—
Lumber	130,000 bdft	838,676	649,478	560,498	486,691	350,530
Stud Lumber	100,000 bdft	2,198	5,059	9,365	687	—
British Pound	25,000	1,263,750	513,682	240,099	78,701	33,465
Canadian Dollar	100,000	601,925	399,885	207,654	161,139	17,068
Deutschemark	125,000	922,608	450,856	400,569	134,368	44,887
Japanese Yen	12,500,000	575,073	329,645	361,731	82,261	1,449
Mexican Peso	1,000,000	19,301	29,982	17,844	17,029	51,439
Swiss Franc	125,000	827,884	493,944	321,451	106,968	37,246
Dutch Guilder	125,000	4	22	3,585	2,812	392
U.S. Silver Coins	$5,000	10	59	275	371	257
French Franc	250,000	144	406	4,449	3,150	5,968
Gold	100 oz	2,543,419	3,558,960	2,812,870	908,180	340,921
T-Bills (90-day)	$1,000,000	3,338,773	1,930,482	768,980	321,703	110,223
T-Bills (1-year)	$250,000	604	11,769	5,564	—	—
T-Notes (4-year)	$100,000	338	11,072	—	—	—
TOTAL		22,261,295	19,930,798	15,153,952	7,878,247	6,200,665

	Contract Unit	1980	1979	1978	1977	1976
Coffee, Sugar & Cocoa Exchange						
Coffee "C"	37,500 lb	906,944	449,799	163,959	214,202	174,486
Sugar #11	112,000 lb	3,576,662	1,792,723	1,016,773	1,055,984	984,677
Sugar #12	112,000 lb	13,839	35,474	21,875	15,676	14,052
Cocoa	30,000 lb	187,309	231,918	222,732	307,628	333,421
Cocoa	10 tons	201,662	265	—	—	—
TOTAL		4,886,416	2,510,179	1,425,339	1,593,543	1,507,260
Commodity Exchange (COMEX)						
Copper	25,000 lb	1,848,080	2,301,033	1,408,688	1,070,210	1,243,011
Zinc	60,000 lb	28	75	677	—	—
Silver	5,000 oz	1,058,734	4,080,619	3,822,085	3,540,047	3,741,908
Gold	100 oz	8,001,410	6,541,893	3,742,376	981,551	479,363
T-Bills (90-day)	$1,000,000	76,081	27,860	—	—	—
T-Notes (2-year)	$100,000	17,653	—	—	—	—
GNMA Mrtges, CD	$100,000	7,403	873	—	—	—
TOTAL		11,009,389	12,952,353	8,973,828	5,591,808	5,464,282
N.Y. Cotton Exch.						
Cotton #2	50,000 lb	2,490,405	1,689,051	1,155,801	826,395	938,543
Orange Jce, Fzn Con	15,000 lb	162,864	186,018	285,405	377,921	69,587
Propane	100,000 gl	25	57	3	301	1,958
TOTAL		2,653,294	1,875,126	1,441,209	1,204,620	1,017,966
N.Y. Futures Exchange						
T-Bills (90-day)	$1,000,000	32,452	—	—	—	—
T-Bonds	$100,000	139,410	—	—	—	—
British Pound	25,000	7,352	—	—	—	—
Canadian Dollar	100,000	692	—	—	—	—
Deutschemark	125,000	258	—	—	—	—
Japanese Yen	12,500,000	199	—	—	—	—
Swiss Franc	125,000	3,630	—	—	—	—
TOTAL		183,993	—	—	—	—
N.Y. Mercantile Exchange						
Palladium	100 oz	62,217	46,994	45,174	19,971	6,811
Platinum	50 oz	429,708	536,124	405,748	122,924	135,810
U.S. Silver Coins	$10,000	6,808	5,462	9,887	15,514	29,751
Gold	1 Kg	10	171	620	1,017	2,351
Imported Lean Beef	36,000 lb	24,119	16,704	5,890	2,690	3,114
Potatoes	50,000 lb	393,759	183,868	453,215	478,558	43,649
No. 2 Heating Oil	1,000 brl	238,284	33,804	116	—	—
TOTAL		1,154,905	828,249	926,793	684,555	640,115
American Commodity Exchange						
GNMA Mrtges, CD	$100,000	4,530	52,493	16,671	—	—
T-Bills (90-day)	$1,000,000	5	4,334	—	—	—
T-Bonds	$100,000	8,050	7,492	—	—	—
TOTAL		12,585	64,319	16,671	—	—
TOTAL ALL CONTRACTS		92,096,109	75,966,471	58,462,172	42,847,064	36,875,727
CHANGE FROM PREVIOUS YEAR		+21.2%	+29.9%	+36.3%	+16.3%	+14.5%

Source: Futures Industry Association

Alcohol

Salient Statistics of Alcohol in the United States In Millions of Gallons[3]

Fiscal Year Beginning Sept.[6]	Ethyl Alcohol								Denatured Alcohol[2]				
		Withdrawals							Completely	Specially			
		Tax-Paid[5] 190° & Over	Tax-Free										
	Production[5]		For Denaturation	For Use of U.S.	Other[1]	Total	Total Withdrawn	Stocks at End of Fiscal Year	Production	Production	Withdrawals	Stocks Aug. 30	Prod. of Refined Methanol[4] (Synthetic & Natural)
1968–9	744.5	62.3	608.9	.6	39.6	649.2	711.5	181.6	2.2	324.6	325.9	2.1	574.9
1969–0	691.8	62.9	543.0	.8	18.4	562.2	625.1	184.0	2.1	289.4	288.6	2.9	633.4
1970–1	570.0	63.3	470.6	.6	12.9	484.1	547.4	150.1	2.3	252.6	253.5	2.3	742.7
1971–2	569.0	68.0	435.4	.8	45.4	481.5	549.5	100.0	2.1	234.5	234.1	2.8	745.5
1972–3	679.7	67.8	460.9	.9	115.9	577.6	645.4	89.6	2.3	246.7	247.2	2.8	974.6
1973–4	647.4	72.4	469.7	.6	88.1	563.3	635.7	82.2	2.2	256.7	257.2	2.3	1,064
1974–5	581.0	72.7	403.3	.3	36.4	440.0	512.7	116.7	1.3	219.3	220.1	2.0	1,036
1975–6	503.4	78.5	419.3	.5	13.7	433.5	512.0	93.1	1.1	221.1	220.5	2.7	779.6
1976–7[6]	494.9	78.7	416.2	.4	14.6	431.2	509.9	79.0	1.1	223.8	224.1	2.7	940.1
1977–8	521.3	85.2	393.7	.4	15.1	409.2	494.4	76.2	1.1	221.9	222.3	2.6	971.8
1978–9								61.5				4.1	970.4
1979–0								70.4				19.9	1,110
1980–1													1,057

[1] Represents withdrawals for hospital, scientific and educational use, for exports, etc. [2] At denaturing plants. [3] Ethyl alcohol in proof gallons; denatured alcohol in wine gallons. [4] On a CALENDAR YEAR basis. [5] Represents alcohol and spirits of 190° of proof and over. [6] THE FISCAL YEAR PRIOR TO 1976–7 was from JULY–JUNE. *Source: Acohol and Tobacco Division*

Average Wholesale Price Index of Ethyl Alcohol, In N.Y. Dec. 1973 = 100[1]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1968	54.5	54.5	54.5	54.5	54.5	54.5	54.5	54.5	54.5	54.5	54.5	54.5	54.5
1969	54.5	54.5	54.5	54.5	56.5	56.5	56.5	56.5	56.5	56.5	56.5	56.5	55.8
1970	56.5	56.5	56.5	56.5	56.5	56.5	56.5	56.5	56.5	56.5	56.5	56.5	56.5
1971	56.5	56.5	56.5	56.5	56.5	56.5	56.5	56.5	56.5	55.0	55.0	55.0	56.1
1972	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0
1973	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0
1974[1]	113.1	115.4	123.6	129.9	133.0	148.9	152.5	154.2	167.5	180.9	189.4	193.9	150.2
1975	201.6	206.3	219.2	219.2	217.8	218.0	216.8	214.6	215.8	217.1	218.2	216.6	215.1
1976	217.2	230.2	233.0	233.6	233.0	233.0	233.0	232.5	233.0	233.0	232.3	233.0	231.4
1977	231.6	233.0	232.3	232.3	232.3	233.0	238.8	244.9	243.6	243.1	242.5	243.9	237.6
1978	243.9	231.0	230.3	226.4	226.4	225.8	226.4	226.6	226.4	218.8	226.4	226.5	227.9
1979	234.8	N.A.	239.2	243.6	248.1	249.4	260.1	265.4	277.6	284.3	291.5	292.2	262.4
1980	311.7	319.6	325.0	338.4	361.4	369.4	370.3	369.2	369.2	369.2	369.2	369.2	353.5
1981	369.2	N.A.											

[1] Data prior to 1974 are for specially denatured No. 1, 190 proof, tank carlots, f.o.b. eastern works; freight prepared in CENTS PER GALLON. *Source: Bureau of Labor Statistics* (0614-0341.04)

U.S. Production of Ethyl Alcohol[1] & Spirits In Millions of Tax Gallons[2]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1968	56.8	52.2	55.2	57.6	58.2	54.6	59.7	56.5	60.0	70.8	60.3	66.2	708.1
1969	67.5	64.4	65.3	56.4	59.3	58.1	61.9	62.8	62.2	75.9	50.5	53.2	737.7
1970	42.2	48.5	59.8	57.7	57.8	59.2	56.9	46.9	58.3	54.8	41.4	48.3	631.5
1971	45.0	41.5	41.7	44.4	43.4	48.6	43.7	43.6	46.9	56.4	51.6	46.9	552.9
1972	38.0	43.8	46.1	43.7	52.4	56.7	64.7	57.7	64.0	59.3	51.5	53.4	621.3
1973	57.1	52.5	57.1	58.4	58.1	55.9	54.2	57.4	59.9	62.7	62.2	56.4	692.1
1974	49.9	49.9	45.3	55.5	52.8	40.8	45.3	52.4	59.5	61.0	48.6	54.8	618.2
1975	52.0	40.4	44.5	41.4	39.8	39.1	41.3	40.1	39.6	53.8	46.4	47.9	526.4
1976	41.6	36.2	44.0	39.3	36.0	37.3	45.2	46.0	43.3	40.1	42.8	47.7	499.6
1977	36.5	37.7	42.8	39.2	43.5	43.2	40.3	40.9	41.0	44.6	48.8	39.7	498.3
1978	35.8	41.1	50.4	42.2	31.3	48.7	42.5	45.4	50.5	40.3	38.0	40.7	506.7
1979	42.8	41.3	49.3	47.3	42.9	48.2	43.8	46.0	53.7	49.4	51.0	54.6	570.4
1980	57.4	52.7	54.7	54.6	54.0	45.7	52.8	46.4	57.2				
1981													

[1] At industrial alcohol plants. [2] A "tax gallon" is the alcoholic equivalent of a U.S. gallon at 60 degrees Fahrenheit, containing 50% of ethyl alcohol by volume. *Source: Internal Revenue Service*

Aluminum

Apparent consumption of aluminum metal in the U.S. during 1980 decreased 2.4 percent to an estimated 4.9 million tons. Of aluminum consuming industries in 1980, packaging accounted for an estimated 26 percent; building—22 percent; transportation—21 percent; electrical—12 percent; consumer durables—7 percent; and other uses—12 percent.

Despite continuing problems of power availability, production of primary aluminum in the U.S. totaled about 5.1 million tons in 1980, slightly above the 1979 level. Washington, Oregon, and Montana accounted for 30 percent of the total production; Texas, Louisiana, and Arkansas, 19 percent; Tennessee, Alabama, and North Carolina, 15 percent; and other Central and Eastern states, 36 percent.

The primary aluminum industry began 1980 with about 165,000 tons of annual capacity shut down in the Pacific Northwest because of a power shortage. An additional 48,000 tons was shut down in March. Advance power and interruptible power were made available temporarily in April and May, and 190,000 tons of capacity was reactivated. However, curtailment of interruptible power in July and advance power at the end of September resulted in a shut down of nearly 100,000 tons of capacity in the Pacific Northwest in October. Elsewhere, annual primary aluminum capacity in operation was reduced by a net total of over 200,000 tons during the year because of market conditions.

In the Pacific Northwest where six primary aluminum producers operate eleven primary aluminum plants, the Bonneville Power Administration (BPA) supplies enough power to the aluminum producers on a firm, non-interruptible basis to cover 75 percent of their power needs, or approximately 75 percent of their plant capacity. The top 25 percent of power needs is sometimes filled by BPA nonfirm, interruptible power on a when-available basis. The nonfirm power is generally available in the months of April through July, and in other months, depending on stream-flow conditions in the Columbia River Basin. For some years, nonfirm power could not be made available the whole year. The top 25 percent of power needs may also be filled by the purchase of BPA advance power, with a payback provision. Advance power is frequently made available following the period in which nonfirm power is available, but also at the option of BPA. Customers pay advance power back to BPA out of reductions in their firm-power deliveries. When such advance power is not available, aluminum producers have to look to more costly, non-BPA sources to fill the top 25 percent of their power needs, or else cut back on their plant operations.

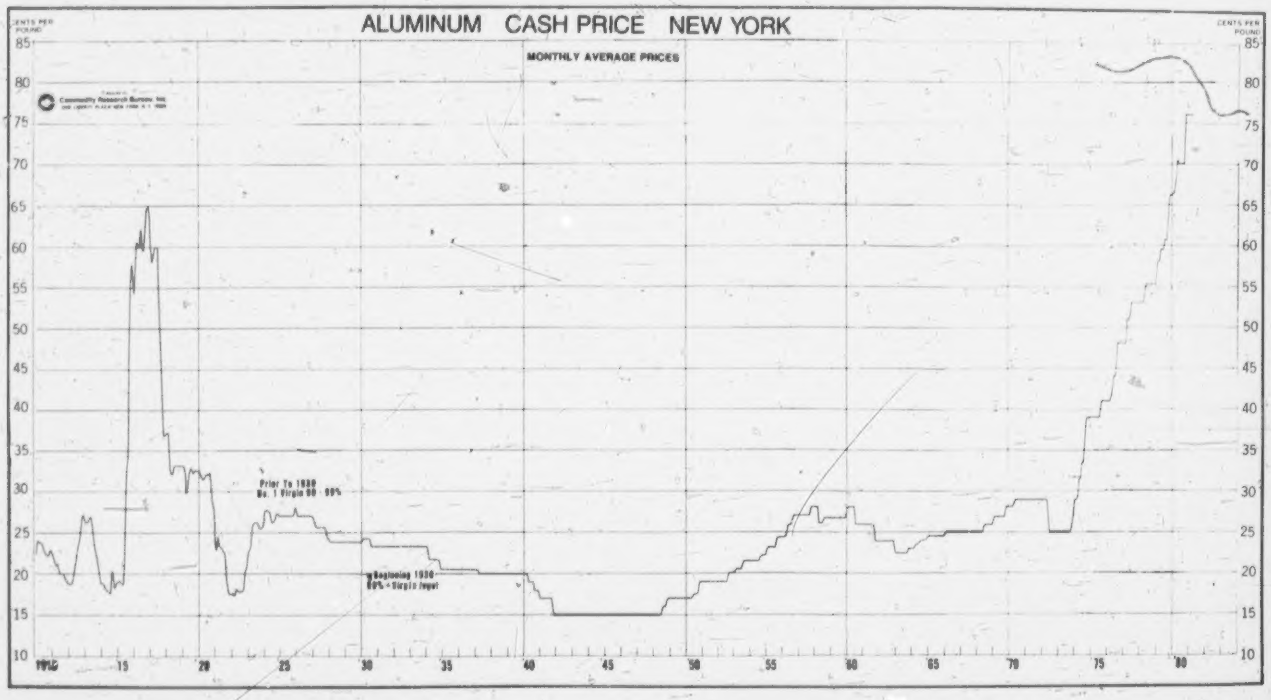
The Pacific Northwest Electric Power Planning and Conservation Act was signed into law early in December 1980. This legislation was expected to enable the Bonneville Power Administration to acquire additional long-term power supplies and enter into new power contracts with aluminum producers in the Pacific Northwest.

New labor contracts to run through May 31, 1983 were signed by the three major aluminum producers, providing an average wage increase of 37 percent over the 3-year life of the contracts based on an 11 percent average annual inflation rate.

In 1980, the Government added aluminum metal to its list of stockpile materials and established a stockpile goal of 700,000 tons.

The price of primary ingot, as quoted by most domestic producers, was 66 cents per pound at the beginning of 1980. The price was increased to 76 cents per pound by early October.

Aluminum futures are traded on the London Metal Exchange.



World Production of Aluminum In Thousands of Short Tons

Year	Australia	Austria	Canada	China	France	W. Germany	Hungary	Italy	Japan	Norway	Spain	Switzerland	Cameroon	Un. Kingdom	United States	USSR	World Total
1971	247	100	1,121		423	471	74	132	984	584	139	104	56	131	3,925	1,300	11,373
1972	227	93	1,013		434	490	75	134	1,118	604	154	92	51	189	4,122	1,380	12,115
1973	228	98	1,038		396	587	75	203	1,209	684	179	94	49	277	4,529	1,500	13,364
1974	242	101	1,125	165	434	759	76	238	1,232	731	211	96	52	323	4,903	1,580	14,516
1975	236	98	978	220	422	747	77	210	1,117	656	232	87	57	340	3,879	1,690	13,387
1976	256	98	698	220	424	768	78	228	1,013	681	232	86	64	369	4,251	1,760	13,771
1977	273	101	1,073	280	441	818	79	287	1,310	693	233	88	61	386	4,539	1,810	15,049
1978[1]	290	101	1,156	330	431	815	79	295	1,166	705	234	88	46	382	4,804	1,840	15,489
1979[2]	297	102	935	360	436	818	80	297	1,114	742	286	91	48	396	5,023	1,900	15,979
1980[2]			1,200		460	800			1,200	730				390	5,050	2,000	16,900

[1] Preliminary. [2] Estimate. *Source: Bureau of Mines*

U.S. Aluminum Inventories, Total (Ingot, Mill Prod. & Scrap) In Million Pounds

Year	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1970	3,785	3,815	3,865	3,839	3,899	3,942	3,932	4,040	4,101	4,102	4,144	4,279
1971	4,387	4,467	4,493	4,475	4,441	4,271	4,463	4,669	4,743	4,771	4,878	4,990
1972	5,026	5,050	5,038	5,003	4,984	4,919	4,869	4,924	4,896	4,868	4,866	4,856
1973	4,861	4,840	4,764	4,697	4,623	4,559	4,609	4,576	4,545	4,504	4,422	4,375
1974	4,366	4,276	4,250	4,182	4,233	4,291	4,329	4,428	4,533	4,559	4,650	4,869
1975	5,156	5,535	5,589	5,866	5,940	6,092	6,086	6,070	6,013	6,014	5,962	6,007
1976	5,999	5,968	5,994	5,888	5,813	5,673	5,543	5,596	5,542	5,523	5,589	5,689
1977[1]	5,631	5,304	5,874	5,648	5,579	5,535	5,452	5,591	5,644	5,606	5,685	5,811
1978[1]	5,706	5,811	5,802	5,732	5,751	5,697	5,666	5,705	5,588	5,612	5,577	5,550
1979[1]	5,496	5,395	5,242	5,009	5,017	4,950	4,893	4,921	4,915	4,941	4,940	5,000
1980[1]	5,112	5,069	5,011	4,949	4,910	4,950	5,021	5,072	5,026	4,968	4,942	5,066

[1] Preliminary. *Source: Bureau of Mines*

Aluminum Imports (General)—Metal & Alloys, Crude—into the U.S. In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1970	35.3	40.4	33.3	32.6	31.9	30.4	31.8	21.7	20.0	23.7	21.1	28.1	350.2
1971	34.3	29.1	44.7	95.7	63.4	60.9	46.6	38.1	43.7	31.5	24.0	48.5	560.4
1972	46.8	43.9	70.0	55.0	73.4	66.3	44.8	39.2	52.2	47.0	53.3	54.5	646.4
1973	58.2	38.8	50.9	43.1	44.7	50.7	34.6	36.0	33.0	46.0	35.1	36.5	507.6
1974	30.5	34.7	48.6	41.1	44.1	38.2	36.6	51.0	41.5	53.1	47.4	42.3	509.0
1975	41.9	37.4	30.7	31.5	25.5	34.9	26.7	43.5	56.4	37.8	45.3	46.3	457.9
1976	36.1	47.0	50.7	71.7	68.8	70.9	33.2	68.6	27.9	34.2	33.6	25.9	568.7
1977	15.8	48.5	68.6	59.3	59.8	74.1	67.5	75.9	42.2	49.6	54.5	57.5	670.2
1978	53.0	64.0	74.4	58.2	89.9	83.5	66.9	50.7	51.3	86.9	43.1	35.0	756.9
1979	69.6	41.0	53.9	44.3	57.8	36.0	62.6	30.8	31.9	39.4	40.8	62.6	571.0
1980	61.8	45.3	47.8	45.4	42.1	51.7	40.3	40.7	43.0	41.4	29.9	78.3	567.7

Source: Bureau of the Census

Aluminum Exports (Metal & Alloys, Crude) from the U.S. In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1970	49.5	50.2	43.1	36.0	41.5	41.1	35.2	14.1	26.9	29.9	15.9	28.0	408.5
1971	15.8	14.3	11.0	11.3	8.0	10.3	3.6	5.6	12.6	4.0	7.7	6.9	112.3
1972	13.4	3.5	6.7	6.4	7.5	8.4	7.7	7.3	9.1	14.2	10.0	14.0	108.3
1973	12.4	11.5	10.6	12.4	11.1	10.3	14.1	16.4	29.8	31.2	47.0	22.8	229.6
1974	22.0	20.9	30.4	22.8	17.7	13.6	15.0	14.4	12.3	16.7	9.2	12.8	207.8
1975	4.8	4.9	3.6	4.5	13.4	8.6	4.8	20.9	13.7	25.2	36.8	44.9	185.8
1976	31.3	4.1	25.8	14.6	7.2	9.7	10.5	9.8	6.2	7.5	13.1	12.7	152.4
1977	9.8	10.6	8.7	12.5	4.4	6.7	7.9	9.3	9.0	2.9	8.9	7.2	97.8
1978	3.7	5.7	6.1	4.2	7.0	9.3	8.5	11.0	15.9	17.7	23.1	14.3	126.6
1979	32.4	15.4	14.8	19.4	12.0	7.7	8.3	12.2	8.4	19.2	17.2	33.6	200.7
1980	39.6	37.7	52.8	52.3	52.3	61.3	51.3	97.6	98.9	70.1	55.0	46.1	715.0

Source: Bureau of the Census

ALUMINUM

Salient Statistics of Aluminum in the U.S. In Thousands of Short Tons

		Production			Recovery from Scrap			Net Shipments[5] by Producers								
								Wrought Products				Castings				
Year	Net Import Reliance as a % of Apparent Consumption	Primary	Secondary	Primary Sold[1]	Old	New	Total Apparent Consumption	Plate Sheet Foil	Rolled Structural Shapes[2]	Extruded Shapes[3]	All	Permanent Mold	Die	Sand	All	Total All Net Shipments
1968		3,255	817	3,403	155	662	4,663	1,957	468	936	3,585	192	489		794	4,379
1969		3,793	901	3,821	148	753	4,710	2,143	482	991	3,833	217	514		849	4,682
1970		3,976	781	3,879	146	636	4,519	2,124	380	841	3,507	175	471		753	4,260
1971		3,925	816	3,887	167	648	5,099	2,281	499	1,010	3,923	174	513		789	4,712
1972		4,122	946	5,802	250	876	4,926	2,994	690	1,188	5,047	210	596		928	5,974
1973		4,529	1,040	6,802	265	977	5,825	3,258	675	1,318	5,451	220	652		1,013	6,464
1974		4,903	993	6,406	304	978	5,428	3,187	696	1,192	5,233	189	544		880	6,113
1975	[7]	3,879	980	4,806	337	899	3,907	2,332	462	821	3,713	144	433	99	688	4,401
1976	9	4,251	1,155	6,175	409	1,062	5,083	3,178	493	1,071	4,858	189	605	110	923	5,780
1977	7	4,539	1,271	6,566	531	1,074	5,492	3,423	467	1,198	5,210	220	652	113	1,004	6,214
1978	11	4,804	1,323	7,143	575	1,098	6,045	3,643	583	1,311	5,673	218	642	121	1,002	6,675
1979[4]	4	5,023	1,401	7,058	614	1,163	5,895	3,603	618	1,263	5,620	222	613	143	996	6,616
1980[6]	[7]	5,130			547	935	5,000									

[1] Or used by producers. Includes shipments to the Gov't. [2] Also rod, bar & wire. [3] Also rod, bar, tube, blooms & tubing. [4] Preliminary. [5] Consists of total shipments less shipments to other mills for further fabrication. [6] Estimate. [7] Net exports.
Source: Bureau of Mines

U.S. Foreign Trade in Aluminum and Products In Thousands of Short Tons

	Imports for Consumption							Exports							
	Crude and Semicrude				Value (Thousand Dollars)			Crude and Semicrude					Manufactures		
Year	Metal & Alloys, Crude	Scrap	Plates, Sheets, Etc.	Total (All)	Crude & Semi	Manufactures	Grand Total	Ingots, Slabs, & Crude	Scrap	Plates, Sheets, Bars, Etc.	Total (All)	Total Value $1,000	Wire & Cable	Total (All)	Value Grand Total Exports $ Ths.
1968	685.7	37.5	42.2	793.1	358,400	4,501	362,901	180.3	49.4	114.1	350.8	195,629	11.6	18,707	214,336
1969	468.2	28.9	37.5	557.7	267,756	4,813	272,569	344.4	86.3	135.7	574.9	323,755	10.1	17,933	341,688
1970	350.1	36.8	59.1	467.7	233,461	15,357	248,818	408.5	57.1	137.8	611.5	361,062	18.1	27,835	390,539
1971	554.2	62.8	55.8	689.8	326,968	16,478	343,446	112.3	30.7	141.1	293.5	197,550	15.5	23,675	221,225
1972	661.0	52.3	59.6	794.5	374,734	15,775	390,509	108.3	66.0	145.0	329.1	209,240	10.2	22,988	232,228
1973	508.0	46.8	42.3	613.6	285,218	15,838	301,056	229.6	115.1	202.4	561.0	370,370	9.2	31,366	401,736
1974	508.6	74.7	45.1	628.4	402,537	19,326	421,863	207.8	80.2	216.0	524.0	482,240	12.3	33,410	535,356
1975	434.1	54.8	48.8	550.3	409,538	9,040	418,578	185.9	66.9	171.0	439.8	436,323	24.4	39,480	501,271
1976	575.4	85.7	67.0	748.6	582,048	16,190	598,238	152.4	109.0	222.4	483.7	495,896	26.4	49,644	571,838
1977	670.2	89.9	57.7	835.6	798,505	19,107	817,612	97.8	101.7	211.5	411.0	504,029	23.3	40,068	571,082
1978	757.1	92.2	207.5	1,080	1,145,019	37,284	1,182,303	126.6	194.5	186.9	519.9	722,593	51.6	121,320	837,730
1979[1]	570.6	68.3	168.7	840.0	1,048,509	41,319	1,089,828	200.7	307.1	248.0	773.4	1,130,369	11.2	43,601	1,212,904
1980[2]	580.5	59.8	72.7	713.0				714.9	68.4	317.1	1,475				

[1] Preliminary. [2] Estimate. *Source: Department of Commerce*

U.S. Production of Primary Aluminum (Domestic & Foreign Ores) In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total[1]
1968	285.3	267.1	288.3	280.3	289.0	218.5	226.0	246.5	269.0	293.4	291.6	300.1	3,255
1969	313.6	286.1	317.2	309.4	323.8	313.0	321.2	318.0	313.0	326.9	318.7	332.2	3,793
1970	334.6	305.5	338.8	329.0	341.4	326.8	339.3	330.9	323.0	334.6	327.0	345.2	3,976
1971	331.9	304.3	338.8	327.1	341.8	325.0	329.5	333.4	325.8	329.0	314.2	324.5	3,925
1972	326	314	336	331	346	340	348	349	347	363	357	364	4,122
1973	372	351	389	371	380	373	382	374	372	388	379	399	4,529
1974	404	376	420	410	422	405	416	411	401	417	405	416	4,903
1975	394	324	347	326	327	302	310	309	300	311	310	319	3,879
1976	322	303	326	325	350	345	365	371	366	391	387	400	4,251
1977	399	352	379	371	382	369	381	376	367	386	380	395	4,539
1978	400	366	395	387	405	395	408	410	399	416	403	418	4,804
1979	418	379	419	402	423	410	428	430	419	435	423	435	5,023
1980	431	406	434	421	438	425	427	426	419	437			

[1] Final annual totals. *Source: Bureau of Mines*

Aluminum Products (Ingot & Mill Products) Shipments[1] in the U.S. In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1968	813.6	788.3	921.9	950.5	1,058	683.3	679.4	731.5	765.7	827.1	799.2	843.8	9,862
1969	870.4	878.8	898.5	887.3	912.5	913.6	881.6	860.7	925.7	933.0	846.4	908.9	10,718
1970	846.1	833.9	935.6	857.0	872.2	896.0	766.3	785.8	824.5	808.9	713.4	812.8	9,953
1971	774.0	774.9	952.6	1,078	1,130	752.1	690.6	813.0	877.1	781.6	791.2	851.1	10,266
1972	891.6	914.9	1,024	951.5	1,073	1,068	887.8	1,007	983.5	1,014	1,041	1,024	11,880
1973	1,169	1,092	1,271	1,199	1,276	1,254	1,129	1,216	1,198	1,343	1,219	1,203	14,568
1974	1,300	1,203	1,307	1,336	1,256	1,225	1,103	1,105	1,025	1,106	890.3	782.4	13,639
1975	769.9	735.5	675.8	736.6	747.9	832.4	825.4	866.6	899.9	921.4	824.6	968.4	9,804
1976	902.5	945.7	1,135	1,059	1,203	1,169	942.1	1,173	1,007	1,016	960.9	1,056	12,568
1977[2]	885.8	976.9	1,432	1,205	1,175	1,208	975.2	1,084	1,050	1,055	1,001	1,146	12,808
1978[2]	932	1,026	1,267	1,079	1,222	1,256	1,113	1,185	1,174	1,340	1,179	1,204	13,982
1979[2]	1,270	1,147	1,374	1,141	1,264	1,201	1,137	1,186	1,084	1,192	1,098	1,130	14,283
1980[2]	1,255	1,218	1,274	1,180	1,135	1,093	1,104	1,177	1,196	1,232	1,013		
1981													

[1] Mill products & pig & ingot (net shipments). [2] Preliminary. *Source: Bureau of the Census*

Average Price of Aluminum (Virgin 99.5% Unalloyed Ingot) at N.Y. In Cents per Pound, Carload Lots

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1968	25.00	25.00	25.00	25.00	25.00	25.85	26.00	26.00	26.00	26.00	26.00	26.00	25.57
1969	26.55	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.00	27.65	28.00	28.00	27.18
1970	28.00	28.00	28.00	28.59	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	28.72
1971	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00
1972	29.00	29.00	29.00	29.00	26.36	25.00	25.00	25.00	25.00	25.00	25.00	25.00	26.45
1973	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.40	26.25	27.25	25.33
1974	29.00	29.00	29.24	31.50	31.50	33.40	33.50	35.94	38.70	39.00	39.00	39.00	34.06
1975	39.00	39.00	39.00	39.00	39.00	39.00	39.00	40.42	41.00	41.00	41.00	41.00	39.79
1976	41.00	41.00	41.00	41.48	42.50	44.00	44.00	46.91	48.00	48.00	48.00	48.00	44.49
1977	48.00	48.00	48.74	51.00	51.00	51.36	52.90	53.00	53.00	53.00	53.00	53.00	51.33
1978	53.00	53.00	53.00	53.00	54.23	55.25	55.25	55.25	55.25	55.25	55.25	55.50	54.44
1979	56.64	58.00	58.00	59.50	59.50	59.50	60.75	60.75	61.18	65.82	66.25	66.25	61.01
1980	66.25	66.86	68.40	70.52	70.00	70.00	70.00	70.00	70.00	75.65	76.00	76.00	70.81
1981	76.00	76.00	76.00										
1982													

Source: American Metal Market

Average Price of Cast Aluminum Scrap (Crank Cases)[1] in New York In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1968	8.50	8.76	9.50	9.29	8.50	8.23	8.00	8.00	8.00	8.00	8.00	8.00	8.41
1969	8.27	9.58	11.00	11.90	12.50	12.50	12.50	12.50	12.14	11.91	11.50	11.50	11.48
1970	11.24	11.00	11.00	11.00	10.98	10.48	9.61	9.50	9.50	8.72	7.25	7.25	9.79
1971	7.48	7.75	7.75	7.75	7.75	7.70	7.25	7.25	6.89	5.75	5.43	5.25	7.00
1972	5.25	5.25	5.64	5.75	5.68	5.50	5.50	5.50	5.50	5.50	5.50	5.70	5.52
1973	6.27	7.00	7.41	8.50	8.50	8.50	8.50	8.50	9.50	9.70	10.00	10.53	8.58
1974	11.61	13.28	14.90	16.30	15.73	14.50	14.50	14.50	12.07	9.72	8.71	7.50	12.78
1975	7.30	7.00	7.00	7.25	7.25	7.25	7.25	7.92	9.86	9.05	9.20	9.75	8.01
1976	9.75	10.17	11.90	14.09	14.10	14.00	15.50	16.45	16.74	15.02	14.50	13.60	13.81
1977	13.50	15.65	18.00	18.00	17.86	16.59	17.50	17.37	15.50	15.00	15.45	16.00	16.37
1978	16.71	18.50	19.11	22.10	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.75	21.39
1979	23.64	25.34	28.05	32.08	35.55	35.65	33.65	30.90	29.55	31.59	31.50	31.50	30.75
1980	34.36	37.90	43.85	37.47	30.52	27.00	28.18	30.52	31.00	31.00	30.08	27.50	32.45
1981	27.50	27.50	27.50										
1982													

[1] Dealers' buying prices. *Source: American Metal Market*

Antimony

Reported consumption of primary and secondary antimony in 1980 was 30,500 tons, a decrease of 15 percent from that of the previous year. Consumption of primary antimony was about 10,500 tons compared with 11,753 tons in 1979. The decline in consumption of secondary metal was attributed to the increased use of other metals as hardening agents in some original equipment starting-lighting-ignition (SLI) battery grids and also to the overall slowdown in the economy. The use of antimony oxide as a flame retardant was about the same as that used in 1979.

The principal uses of antimony, in 1980, were flame retardants—51 percent; transportation, including batteries—20 percent; ceramics and glass—15 percent; chemicals—5 percent; and other—9 percent.

Approximately 66 percent of the reported 1980 domestic consumption of antimony was derived from old and new scrap. Recovery of antimony from battery-plate scrap comprised about 85 percent of the total secondary output.

Nearly all the domestic mine production of antimony in 1980 was by two companies, one in Idaho and one in Montana, according to the Bureau of Mines. The decrease in production by the Sunshine Mining Co. due to its 8-month strike was offset by an increase in production by U.S. Antimony Corp. The Sunshine strike was settled in November. Primary production and imports for consumption registered decreases during the year, and secondary production and total consumption of antimony also were down from the 1979 levels.

Total imports of antimony in all forms decreased about 2,000 tons to 20,000 tons in 1980. Imports of ore and concentrate decreased 15 percent to about 6,400 tons and imports of antimony oxide were 5 percent below the 1979 totals at about 11,000 tons. Antimony metal imports declined 15 percent to about 2,600 tons. Imports from Bolivia, Mexico, and Canada accounted for about 85 percent of the receipts of ore and concentrate. About 60 percent of the antimony oxide imports were supplied by the Republic of South Africa, and Mainland China provided another 20 percent. Bolivia accounted for about 60 percent of the imports of antimony metal.

Net import reliance (imports minus exports plus adjustments for Government and industry stock changes) for antimony represented 53 percent of apparent consumption in 1980.

Industrial stocks at yearend were 7,000 tons, about the same as at the end of 1979. However, the U.S. government stockpile contained 40,729 tons in late 1980, compared with a stockpile goal of 36,000 tons.

New York dealer quotations for antimony during 1980 ranged from 145 to 165 cents per pound.

World Production of Antimony (Content of Ore) In Short Tons

Year	Australia	Bolivia	Canada[2]	China[1]	Czechoslovakia	Italy	Morocco	Mexico[2]	Peru (Recoverable)	Turkey	South Africa	United States	U.S.S.R.	Yugoslavia[4]	World Total[1]
1969	65	14,484	410	13,000	660	1,415	1,551	3,555	676	3,495	20,080	938	7,300	2,278	73,001
1970	66	12,970	363	13,000	660	1,432	2,008	4,925	1,286	3,053	19,147	1,130	7,400	3,197	77,124
1971	66	12,861	162	13,000	660	1,295	2,174	3,705	757	3,124	15,704	1,025	7,600	2,207	70,653
1972	66	14,703	340	13,000	660	1,324	917	3,280	826	2,982	16,062	489	7,700	2,177	73,986
1973	66	16,461	830	13,000	770	1,497	1,364	2,632	756	3,696	17,306	545	7,800	2,265	76,920
1974	1,550	14,396	1,380	13,000	830	1,297	2,029	2,653	751	6,482	16,722	661	8,000	2,434	79,232
1975	2,431	13,136	2,020	13,000	770	1,113	1,160	3,458	305	4,010	17,553	886	8,300	2,406	77,114
1976	2,086	18,756	2,535	13,000	314	1,112	1,560	2,806	665	1,890	11,793	283	8,500	2,228	75,292
1977	2,303	13,660	3,500	13,000	330	891	1,553	2,974	907	2,118	12,715	610	8,700	2,478	72,483
1978[3]	1,669	13,968	3,300	14,000	330	1,026	2,437	2,708	987	2,610	10,024	798	8,700	3,040	72,122
1979[1]	2,300	14,351	3,300	17,000	330	1,000	2,300	2,700	990	2,700	12,958	722	9,000	3,100	79,381
1980[1]		15,000						2,700			11,000	800		2,600	77,100

[1] Estimated. [2] Includes antimony content of miscellaneous smelter products. [3] Preliminary. [4] Metal.
Source: Bureau of Mines

Average Price of American Antimony R. M. M.[2] Brand (N.Y. Equivalent[1]—in Bulk) In Cents Per Pound

Year	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1969	45.75	45.75	48.75	50.25	51.20	54.00	55.25	55.25	63.75	65.75	65.75	85.56	57.52
1970	105.75	105.75	164.19	178.00	178.00	178.00	178.00	172.29	144.38	122.73	98.00	98.00	143.59
1971	98.00	98.00	82.48	81.00	70.55	70.00	60.57	59.00	59.00	59.00	59.00	59.00	71.30
1972	59.00	59.00	59.00	59.00	59.00	59.00	59.00	59.00	59.00	59.00	59.00	59.00	59.00
1973	59.00	60.26	62.00	65.14	68.00	68.00	68.00	68.00	68.00	68.00	77.00	90.00	68.45
1974	94.00	98.74	104.00	142.00	177.00	213.50	225.00	225.00	225.00	225.00	225.00	225.00	181.60
1975	213.18	199.00	199.00	199.00	188.71	160.00	160.00	160.00	160.00	160.00	160.00	160.00	176.57
1976	158.00	158.00	158.00	158.00	158.00	158.00	158.00	158.00	166.90	175.00	175.00	175.00	162.99
1977	175.00	175.00	175.00	175.00	175.00	175.00	175.00	175.00	175.00	175.00	175.00	175.00	175.00
1978	175.00	175.00	175.00	175.00	175.00	175.00	175.00	175.00	175.00	175.00	175.00	175.00	175.00
1979[2]	177.00	177.00	190.00	201.00	201.00	201.00	201.00	201.00	201.00	201.00	201.00	201.00	196.08
1980	201.00	201.00	201.00	201.00	201.00	201.00	201.00	201.00	201.00	201.00	201.00	200.00	201.00
1981	200.00	200.00	200.00										

[1] Of F.O.B. Laredo, Texas Base. [2] Domestic refined in alloy beginning Jan. 1979. *Source: American Metal Market*

Salient Statistics of Antimony in the United States In Short Tons

Year	Net Import Reliance as a % of Apparent Consumption	Production (Gross Weight) Ores	Production Primary[2] Mine	Production Primary[2] Smelter	Production Secondary (Alloys)[2]	Imports[5] Ore Gross Weight	Imports[5] Ore Sb Content	Imports[5] Metal Gross Weight	Exports[3]	Industry Stocks, Dec. 31[3] Ores & Concentrates	Industry Stocks, Dec. 31[3] Metallic	Industry Stocks, Dec. 31[3] Oxide	Industry Stocks, Dec. 31[3] Sulfide	Industry Stocks, Dec. 31[3] Total[6]	Prod. of Antimonial Lead[2]
1969		5,707	938	13,203	23,840	24,158	12,098	980	207	2,227	1,273	2,053	108	6,339	2,082
1970		6,681	1,381	13,381	21,424	34,415	13,820	1,290	543	2,973	1,598	2,932	39	8,847	1,184
1971		4,721	1,025	11,374	20,917	22,102	9,619	1,638	1,023	3,582	1,367	2,697	22	8,637	1,191
1972		2,072	489	13,344	22,428	33,542	17,212	2,302	121	3,562	1,332	3,179	182	8,622	1,050
1973		2,468	545	17,206	24,062	33,869	16,679	692	515	5,585	1,540	2,074	31	10,078	1,167
1974		3,217	661	16,657	23,570	31,330	14,655	2,203	871	6,275	809	3,732	35	11,694	1,097
1975	49	4,505	886	12,189	17,964	20,736	8,320	2,112	340	8,364	1,380	3,886	32	14,957	567
1976	54	1,111	283	14,618	19,799	20,945	10,023	2,083	341	7,899	1,662	4,560	31	15,070	730
1977	41	3,496	610	12,827	30,601	8,042	3,438	1,722	742	1,869	1,359	4,576	24	8,591	900
1978	43	4,231	798	14,110	26,456	8,672	4,495	4,127	556	1,610	1,119	4,906	19	8,201	783
1979[1]	53	3,294	722	15,062	24,155	15,745	7,732	3,022	485	1,757	1,314	3,398	17	7,144	299
1980[4]	53	—	712	15,085	10,442		5,235	2,591	520	2,743	700	3,536	11	6,959	—

[1] Preliminary [2] Antimony content. [3] Antimony ore, metal & compounds. [4] Estimate. [5] Imports for consumption. [6] Including primary antimony residues & slag. *Source: Bureau of Mines*

Industrial Consumption of Primary Antimony in the United States In Short Tons (Antimony Content)

Year	Ammunition	Metal Products Antimonial Lead	Metal Products Sheet & Pipe	Metal Products Bearing Metal & Bearings	Metal Products Cable Covering	Metal Products Solder	Metal Products Type Metal	Metal Products Total All Metal Products	Non-Metal Products Fireworks	Non-Metal Products Flame Retardant	Non Metal Ceramics & Glass	Non Metal Rubber Pdt's.	Non Metal Pigments	Non Metal Plastics	Non Metal Total[3]	Grand Total
1968		6,817	105	755	178		423	9,043	37	2,774	2,037	440	859	2,318	9,477	18,520
1969		6,723	105	758	55		541	8,765	30	2,096	2,108	433	722	2,558	9,078	17,843
1970		5,246	77	481	38		220	6,574	17	1,774	1,820	519	610	1,667	7,363	13,937
1971		5,430	74	515	36		177	6,621	4	1,524	1,840	525	592	1,810	7,086	13,707
1972	64	6,149	108	559	19		142	7,382	4	2,280	1,695	587	644	2,391	8,742	16,124
1973	122	8,027	97	527	12		134	9,291	5	2,906	1,917	693	644	2,920	11,322	20,613
1974	121	7,251	69	476	16		107	8,429	11	4,383	1,384	664	460	1,431	5,229	18,041
1975	239	4,568	60	402	23	133	75	5,647	10	3,799	989	458	321	1,091	3,541	12,987
1976	63	3,861	74	405	19	188	79	4,900	12	5,552	1,260	578	415	1,277	4,885	15,337
1977	138	2,936	56	265	16	220	83	3,847	9	5,765	1,547	473	400	1,503	4,211	13,823
1978	133	2,832	39	279	21	206	81	3,736	5	5,854	1,259	254	410	1,456	3,562	13,152
1979[1]	253	1,300	36	235	16	199	37	2,213	6	6,083	1,127	182	399	1,580	3,457	11,753
1980[2]	363	800	45	200	25	60	20	1,750	5	4,000	1,210	100	350	800	3,000	10,676

[1] Preliminary. [2] Estimate. [3] Excludes flame-retardant. *Source: Bureau of Mines*

Antimony Imported[3] into the U.S. & Price Ranges

Year	Imported for Consumption Antimony Ore Value Ths. $	Needle or Liquidated Antimony Gross Weight Sh. Tons	Needle or Liquidated Antimony Value $ Ths.	Antimony Metal Short Tons	Antimony Metal Value $ Ths.	Type Metal & Anti. Lead Short Tons	Antimony Oxide Short Tons	Antimony Oxide Value $ Ths.	Foreign Metal ¢[2] Lb.	Antim. Trioxide ¢[2] Lb.	Antimony Ore 50–55% $ Short Ton	Antimony Ore Minimum 60% $ Short Ton	Antimony Ore Minimum 65% $ Short Ton
1968	4,145	60	42	2,693	2,037	N.A.	4,801	3,540	40–44	47½	5.00–5.40	5.80–5.85	5.90–5.95
1969	5,248	62	51	980	888		4,715	3,852	42½–300	47½–65½	5–5.40	7–25	
1970	12,733	18	54	1,290	3,493		4,256	10,023	80–400	97½–170		17–40	
1971	8,787	32	47	1,638	1,914		2,791	4,317	52–95	77–100		8.64–10	
1972	9,437	78	73	2,302	2,092		5,032	5,766	53½–57	69–77		7.60–10	
1973	10,903	51	73	692	745		4,651	6,095	55–135	69–105½		7.60–18.65	
1974	20,866	86	271	2,203	7,550		6,269	15,580				17–32	
1975	14,535	74	255	2,112	5,677		9,908	12,588	130–200	165–216		25½–27½	
1976	16,911	41	129	2,083	4,986		11,611	17,029					
1977	6,832	259	580	1,722	4,536		9,641	15,150	100–155	164–180		175–178	
1978	6,174	52	121	4,127	7,897		10,667	18,803	105–135	164–180		175	
1979[1]	11,860	28	90	3,022	7,100		13,679	17,921	125–160	150–180		196	
1980[1]				2,591								200	

[1] Preliminary. [2] Duty paid delivery, N.Y. [3] Imports for consumption. *Source: Bureau of Mines*

Apples

World Production of Apples (Dessert & Cooking) In Thousands of Metric Tons[3]

Year	Mexico	Argentina	Australia	Spain	Belg-Lux.	Canada	France	Germany (West)	Italy	Japan	Netherlands	Turkey	United Kingdom	United States[2]	Yugoslavia	World Total
1968		22.9	22.2		9.8	21.5	96.7	82.4	101.4	59.6	17.8	36.7	18.5	130.1	16.0	730
1969[3]		446	424		312	433	1,841	2,573	2,010	1,085	475	620	390	3,093	483	15,913
1970		424	443		252	406	1,876	1,777	2,062	1,021	450	748	491	2,902	277	14,952
1971		512	360		280	398	1,854	1,980	1,698	1,007	520	780	466	2,890	327	15,233
1972		233	456		265	393	1,719	1,239	1,873	959	400	850	350	2,668	309	13,849
1973		233	335	1,015	246	375	2,060	2,016	2,050	963	460	850	456	2,830	448	15,719
1974	213	786	368	1,038	209	406	1,610	1,281	1,886	850	385	950	340	2,964	370	14,895
1975	230	608	368	1,091	268	460	2,125	2,035	2,127	898	430	900	338	3,415	370	16,910
1976	329	576	275	1,008	241	409	1,598	1,487	2,143	879	380	1,000	388	2,936	486	15,501
1977	276	820	301	672	120	411	1,186	1,176	1,828	959	315	900	234	3,027	381	13,934
1978	342	810	258	1,015	273	452	1,767	1,783	1,874	844	510	1,100	342	3,451	381	16,560
1979[1]	355	972	345	1,156	322	436	1,715	1,951	2,023	853	570	1,350	363	3,669	428	17,861
1980[1]	238	958	288	902	317	468	1,801	1,773	2,000	958	560	1,100	358	3,774	464	17,618
1981																

[1] Preliminary. [2] Commercial crop. [3] Data prior to 1969 are in MILLIONS OF BOXES. (42 pound boxes.)
Source: Foreign Agricultural Service, U.S.D.A.

Salient Statistics of Apples[1] in the United States

	Production		Western Avg. Auction Price N.Y. $ Per Box		Utilization of Quantities Sold					Avg. Farm Price ¢ Per Lb.	Farm Value Million $	Foreign Trade[4]			
						Processed[5]						Domestic Exports			Imports Fresh & Dried[5]
Year	Total	Having Value	Golden Delicious	Red Rome	Fresh	Canned	Dried	Frozen	Other[3]			Fresh	Dried[5]	Canned[5]	
	Millions of Pounds											Million Bushels			
1968	5,469	5,446	6.10	5.12	3,193	1,175	174	228	676	6.11	332.7	1.6	.2	—	2.6
1969	6,820	6,709	4.66	3.14	3,701	1,400	283	247	1,080	4.06	272.3	2.3	.2	—	1.9
1970	6,398	6,258	5.48	2.76	3,532	1,159	190	203	1,176	4.54	283.9	2.1	.2	—	2.1
1971	6,373	6,083	5.76	4.37	3,484	1,094	96	191	1,219	4.92	299.2	2.5	.1	—	1.8
1972	5,879	5,868	6.36	5.04	3,342	977	149	235	1,165	6.43	377.5	3.1	.3	—	2.3
1973	6,265	6,252	7.76	5.00	3,539	1,255	248	259	950	8.80	549.0	3.7	.3	—	1.9
1974	6,580	6,530	8.81	7.04	3,691	1,226	197	182	1,235	8.40	551.6	4.9	.2	—	1.6
1975	7,530	7,103	8.22	5.16	4,357	1,027	230	207	1,283	6.50	460.9	4.7	.2	—	2.6
1976	6,472	6,468	7.57	3.67	3,917	920	229	220	1,182	9.10	586.6	5.7	.2	—	2.6
1977	6,740	6,643	8.76	7.28	3,794	1,075	226	161	1,388	10.50	698.9	6.5	.4	—	2.9
1978	7,597	7,544	9.77	6.00	4,221	1,224	221	207	1,681	10.40	781.4	7.1	.3	—	3.6
1979[2]	8,143	8,118			4,301	1,335	264	137	2,028	10.90	883.4				
1980[2]	8,707	8,692								9.50	821.8				
1981															

[1] Commercial crop. [2] Preliminary. [3] Mostly crushed for vinegar, cider, & juice. [4] Year beginning July. [5] In terms of fresh.
Source: Statistical Reporting Service, U.S.D.A.

Wholesale Price of Apples (Delicious) in the United States In Dollars Per Box

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1968	6.092	6.500	6.555	7.711	6.880	N.A.	N.A.	N.A.	N.A.	7.245	8.175	6.959	7.015
1969	7.666	8.282	6.929	7.347	6.925	N.A.	N.A.	N.A.	N.A.	4.049	4.318	4.920	6.305
1970	3.592	4.517	3.802	4.247	4.087	N.A.	N.A.	N.A.	N.A.	6.332	6.414	7.967	5.120
1971	N.A.	6.347	N.A.	6.793	6.614	6.873	N.A.	N.A.	N.A.	6.360	8.100	6.885	6.853
1972	6.045	6.393	5.956	6.164	5.903	5.748	N.A.	N.A.	N.A.	7.350	8.121	7.560	6.582
1973	7.300	6.490	7.773	8.687	8.333	10.387	N.A.	N.A.	N.A.	6.869	8.125	7.868	7.981
1974	7.110	7.370	6.066	6.650	8.500	N.A.	N.A.	N.A.	8.213	9.793	N.A.	8.320	7.753
1975	8.193	9.500	10.000	9.580	11.783	14.081	N.A.	N.A.	N.A.	7.261	7.272	7.440	9.457
1976	7.217	8.437	8.250	8.750	7.752	8.070	N.A.	N.A.	N.A.	9.610	9.008	9.785	8.542
1977	N.A.	10.900	10.030	9.794	9.725	9.935	N.A.	N.A.	N.A.	9.960	9.000	8.020	9.417
1978	11.183	11.280	11.305	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	21.612	14.000	13.876
1979	13.500	14.000	14.000	14.500	13.500	13.750	N.A.	N.A.	N.A.	12.750	14.500	15.250	13.972
1980	15.750	15.667	16.750	16.750	16.750	19.000	N.A.	N.A.	N.A.	12.500	12.000	12.000	15.240
1981	12.000	12.250											
1982													

Source: Bureau of Labor Statistics (0111-0215.01)

Arsenic

Arsenic trioxide is recovered as a byproduct of copper production, and both U.S. arsenic production and shipments decreased in 1980 as a result of the industry-wide copper strike that began in July. The world supply of arsenic was further curtailed when shipments of arsenic from Sweden were halted for the month of May as a result of that country's national labor strike.

Four major pesticide and desiccant producers and two major wood preservative producers consume 90 percent of all arsenic in the U.S. Estimated distribution of arsenic in 1980 by major use was as follows: the manufacture of agricultural chemicals (herbicides, cotton desiccants and defoliants, and soil sterilizers)—50 percent; industrial inorganic chemicals (wood preservatives and mineral flotation reagants) —40 percent; glass and glassware—5 percent; nonferrous alloys (lead and copper)—3 percent; other uses (feed additives, pharmaceuticals, and electronic devices)—2 percent.

A high percentage of domestic demand for arsenic is met by imports (there is no arsenic recovered from scrap sources). Major sources of imports in the 1976–1979 period were: Mexico—38 percent; France—31 percent; Sweden—26 percent; others—5 percent.

In June 1980, inorganic arsenic was added to the Environmental Protection Agency's list of hazardous air pollutants because of a high probability it can cause cancer. EPA estimated that inorganic arsenic emissions into ambient air total more than 6,000 tons per year, with about 65 percent of this coming from the operations of copper, lead, and zinc smelters.

All arsenic prices increased substantially in 1980. The price of domestically produced trioxide increased from 24.25 cents on December 31, 1979 to 31.75 cents per pound on December 31, 1980. The price of domestically-produced metal increased from $1.90 per pound on December 31, 1979 to $3.00 on December 31, 1980.

World Production of White Arsenic (Arsenic Trioxide) In Short Tons

Year	Portugal	Spain	Brazil	Canada	France	W. Germany	U.S.S.R.	Japan	Mexico	Peru	Rep. of Korea	Sweden	So. West Africa	World Total
1968	207	143	344	337	15,232	746	7,770	789	14,915	1,353	N.A.	23,259	2,450	67,545
1969	272	101	331	170	15,000	648	7,830	639	8,800	530	N.A.	18,188	2,444	54,953
1970	209	19	328	71	11,236	408	7,880	974	10,075	851	N.A.	18,078	4,478	54,607
1971	205	—	163	50	11,000	40	7,880	1,054	12,658	723	N.A.	17,600	4,080	55,453
1972	15	—	181	30	8,423	491	7,940	471	6,523	1,123	N.A.	17,857	2,612	45,666
1973	399	—	76	—	9,000	520	7,990	322	5,606	1,528	10	16,755	8,981	51,187
1974	290	—	20	—	9,000	401	8,050	213	10,477	2,175	18	16,190	7,319	54,153
1975	282	—	14	—	7,300	350	8,100	66	6,747	1,461	110	12,884	7,345	44,659
1976	306		0		8,002	400	8,200	66	6,062	879	782	7,411	5,646	37,754
1977	245		—		8,000	400	8,300	—	6,332	1,507	541	7,443	2,882	35,650
1978[1]	220				8,000	400	8,400	N.A.	6,884	1,386	604	7,372	2,647	35,913
1979[2]	240				6,000	400	6,500	N.A.	5,458	2,690	650	5,600	1,900	29,248
1980[2]					5,000		6,500		5,700	2,700		4,500	1,900	27,400
1981														

[1] Preliminary. [2] Estimate. *Source: Bureau of Mines*

Salient Statistics of White Arsenic in the U.S. In Short Tons

Year	Imports				Price	Value of Imports Thous $	Imports for consumption White Arsenic	Trioxide Domestic[5] 95% As_2O_3	Metal Domestic 99% As	Imports of Arsenic Trioxide from						Consumption of Wood Preservatives[3]
	Metallic Arsenic	Arsenic Acid	Sulfide	Arsenic Compounds	Powered in Barrels ¢ lb.[4]			¢ lb.	12/31	Peru	Canada	France	Mexico	South Africa	Sweden	
1968					6–6¼		25,195			644		6,424	7,159	1,134	9,315	1,247
1969					6¼–6¾	2,064	18,171			255		4,336	7,361	121	6,071	N.A.
1970					6¼–6¾	2,089	18,763			100		2,650	7,750	111	8,142	806
1971					6¼–6¾	2,187	17,306			68		1,425	8,316	196	7,276	1,085
1972	661				6¼–6¾	1,956	13,613			24		1,556	3,552	285	8,184	
1973	643			—	6¼–6¾	2,045	13,496			25		1,281	5,605	409	6,144	
1974	707			43	13	2,449	13,742			24	—	480	6,185	145	6,889	
1975	483			77	20–23	4,426	12,013	13.1	160	66	—	595	3,174	970	7,172	
1976	288			355	20–21	1,528	4,262	13.1	175	—	—	462	3,793	—	3	
1977	357	382	—	1,109	20–21	1,962	5,981	13.1	190	—	22	1,352	3,089	—	1,323	
1978[2]	369	565	—	473	28–32	3,770	10,306	23¼	190	—	136	5,077	2,603	—	2,281	
1979[1]	405	176	39	1	32	5,562	12,325	24¼	190	477	277	3,242	3,125	—	5,014	
1980[1]	300				35		13,000	33¼	300							
1981																

[1] Estimate. [2] Preliminary. [3] Wolman salts (25% sodium arsenate). [4] Refined, 99% at N.Y. docks. [5] F.O.B. Tacoma, Wash. *Source: Bureau of Mines*

Barley

U.S. production of barley in 1980/81 totaled 359 million bushels, 6-percent less than in 1979/80. The smaller crop in 1980 resulted from a reduction in harvested acreage and lower yields in some of the major producing States, primarily in North and South Dakota and Minnesota.

Acreage harvested for grain was estimated by the USDA at 7.23 million acres, 4 percent less than 1979. Area harvested in 1980 was the smallest since 1934. Yield per harvested acre averaged 49.6 bushels, 1.3 bushels below last year's record high. Extremely hot and dry weather in Minnesota and the Dakotas reduced yields but this was partially offset by record high yields in California, Oregon, Washington, Utah, and Idaho.

Spring planting in the Dakotas, Minnesota, and Montana got off to a good start with dry, warm weather conditions. However, lack of rainfall following planting resulted in spotty emergence and greater than normal acreage abandonment as well as reduced yields. In the Pacific Northwest, adequate moisture and good growing conditions resulted in record yields.

Harvest operations during 1980 in the upper North Central States got underway much earlier than normal because of extreme heat which prematurely advanced ripening of the crop. Weather during late July was excellent for harvesting the early maturing grain but combining of some of the later fields was hampered by rainfall in mid-August. In the Northwest, harvest progressed rapidly under the mostly dry weather conditions of late July and early August.

Barley disappearance for 1980/81 was estimated at 412 million bushels, 4 percent below last year. Domestic feed use likely will decline by about 41 million bushels to 165 million. Exports are expected to increase by 36 percent from 55 million bushels in 1979/80 to 75 million in 1980/81.

Barley stored in all positions on January 1, 1981, totaled 302 million bushels, 17 percent less than a year earlier. Disappearance during June–December 1980 was about 254 million bushels, virtually the same as the corresponding period a year earlier. Stocks on April 1, 1981 totaled 202 million bushels, nearly 23 percent below the previous year.

Farm prices of barley in mid-January averaged $3.10 per bushel compared with $2.27 last January. Prices for feed barley in the Minnesota, North Dakota, and South Dakota area averaged $2.43 in mid-January. Prices were expected to average $2.80 per bushel in 1980/81, compared with $2.29 in 1979/80.

U.S. 1981/82 barley production was projected by the USDA in May 1981 at 415 million bushels. With carryover stocks estimated at 149 million bushels and imports of 10 million, U.S. 1981/82 supply was projected at 574 million bushels, up 13 million bushels from 1980/81. Disappearance during 1981/82 was projected at 405 million bushels, 7 million less than last season. Ending stocks were projected at 169 million bushels, up 20 million from 1980/81. Prices in 1981/82 were projected by the USDA to average $2.35 to $2.85 per bushel.

Government Price Support

The 1981 target price for barley was increased 5 cents to $2.60 per bushel from the 1980 target price of $2.55. The 1981 loan rate for barley entered into the Grain Reserve was increased to $2.07 per bushel from $1.95 in 1980 while the 1981 regular loan rate was increased to $1.95 per bushel from $1.83 per bushel in 1980. There is no set aside or requirement for planting within a farm's normal crop acreage for producers to qualify for 1981 program benefits.

Futures Market

Barley futures are traded on the Winnipeg Commodity Exchange.

World Production of Barley In Thousands of Metric Tons

Crop Years	China	United States	Argentina	Canada	Rep. of Korea	Denmark	Morocco	France	India	Japan	U.S.S.R.	W. Germany	Spain	Turkey	United King.	World Total
1968–9		9,278	556	7,084	2,084	5,059	2,223	9,139	3,504	1,021	24,600	4,825	3,708	3,500	8,271	114,388
1969–0		9,298	570	8,238	2,066	5,255	1,310	9,452	2,424	812	26,800	4,796	3,969	3,700	8,663	117,354
1970–1		9,060	367	9,050	1,974	4,813	1,477	8,126	2,716	573	31,600	4,611	3,092	3,300	7,529	119,579
1971–2		10,094	553	13,099	1,857	5,458	1,675	8,930	2,784	503	34,564	5,601	4,783	4,170	8,558	136,475
1972–3		9,220	880	11,285	1,965	5,572	1,744	10,425	2,577	325	36,800	5,817	4,358	3,725	9,238	138,500
1973–4		9,188	732	10,224	1,778	5,507	1,255	10,844	2,379	216	55,044	6,622	4,402	2,900	9,007	157,992
1974–5		6,619	430	8,802	1,388	5,967	2,387	10,037	2,371	233	54,161	7,048	5,404	3,330	9,133	159,881
1975–6		8,361	523	9,520	1,700	5,156	1,585	9,344	3,135	221	35,808	6,971	6,728	4,500	8,513	144,467
1976–7		8,099	760	10,513	1,759	4,768	2,761	8,319	3,192	210	69,539	6,487	5,473	4,900	7,648	177,987
1977–8	6,860	9,144	353	11,799	814	6,084	1,345	10,290	2,344	206	52,687	7,483	6,693	4,750	10,520	104,546
1978–9	6,700	9,776	554	10,397	1,348	6,301	2,326	11,321	2,311	326	62,077	8,608	8,608	4,750	9,848	182,000
1979–0[1]	6,800	8,230	329	8,460	1,508	6,680	1,886	11,238	2,121	406	45,500	8,156	6,150	4,600	9,550	157,000
1980–1[2]	7,200	7,163	339	11,041	910	6,300	2,000	11,235	2,000	450	57,200	8,720	7,100	4,650	9,600	172,000
1981–2																

[1] Preliminary. [2] Estimated. *Source: Foreign Agricultural Service, U.S.D.A.*

U.S. Barley Acreage and Prices

Year Beginning June 1	Acreage (Million Acres)				Yield per Harvested Acre In Bushels	Seasonal Prices				Govt. Price Support Operations			
	National Program	Set-aside	Planted	Harvested for Grain		Received by Farmers[1]	Minneapolis No. 3 or Better		Portland No. 2 Western	National Avg. Loan Rate	Support or Target Price	(Mil. Bu.)	Total Payments to Participants (Mil. $)
							Feed[2]	Malting[3]					
						Dollars per Bushel							
1971–2	18.0	0	11.1	10.2	45.7	.99	1.04	1.13	1.49	.81	0	88.9	0
1972–3	18.0	4.9	10.6	9.7	43.6	1.17	1.17	1.39	1.68	.86	0	41.7	107.2
1973–4	17.3	1.4	11.0	10.3	40.5	2.13	2.03	2.63	2.69	.86	1.34	15.3	77.7
1974–5	[6]	0	8.7	7.9	37.7	2.81	2.58	4.16	3.02	.90	1.13	6.9	16.0[7]
1975–6	[6]	0	9.4	8.6	44.0	2.42	2.38	3.51	2.54	.90	1.13	9.2	4.9[7]
1976–7	[6]	0	9.3	8.4	45.4	2.25	2.35	3.13	2.48	1.22	1.28	19.2	10[7]
1977–8	11.7	0	10.8	9.7	44.0	1.78	1.68	2.27	2.15	1.63	2.15	86.9	121[8]
1978–9	7.5	.8	10.0	9.2	49.2	1.92	1.80	2.38	2.10	1.63	2.25	68.0	97[7]
1979–0	7.8	.7	8.1	7.5	50.9	2.29	2.16	2.87	2.69	1.71	2.40	30	22[8]
1980–1[4]	8.7	—	8.3	7.2	49.6	2.65–2.85	2.60	3.55	3.23	1.83	2.55	28	30[7]
1981–2[5]			9.1							1.95	2.60		

[1] Excludes support payments. [2] Beginning June 1977, No. 2 Feed. [3] 60% to 70% plump or better. [4] Preliminary. [5] Estimate. [6] Available for total feed grains only. [7] Disaster payments. [8] Deficiency & disaster payments. [9] Deficiency, disaster & diversion payments. *Source: Commodity Economic Division, U.S.D.A.*

Production of Barley in the United States, by States In Millions of Bushels

Year	Arizona	California	Colorado	Idaho	Kansas	Minnesota	Oklahoma	Montana	North Dakota	Oregon	Pennsylvania	Utah	South Dakota	Washington	U.S Total
1968	12.8	67.5	11.0	27.0	3.7	46.5	12.1	42.7	107.3	10.5	9.0	7.8	19.1	10.7	426.2
1969	10.2	50.6	12.3	35.3	6.3	31.9	18.9	67.9	91.2	17.6	9.2	7.8	12.0	16.8	427.1
1970	10.6	58.8	14.6	41.3	6.9	21.5	23.4	65.1	65.9	18.2	8.6	8.2	12.1	19.9	416.1
1971	8.8	53.3	13.9	41.4	7.4	40.7	15.4	58.8	99.8	18.1	9.0	8.5	19.6	27.8	462.4
1972	6.9	50.9	11.0	39.7	4.3	34.0	8.8	64.0	104.7	12.0	7.4	8.1	20.7	14.2	421.7
1973	8.3	47.9	12.3	43.5	3.0	41.1	7.3	60.0	102.5	9.2	5.7	7.7	22.1	13.5	417.4
1974	4.3	45.6	10.0	31.7	1.5	28.9	2.8	37.5	56.3	8.6	7.7	7.1	12.8	12.4	298.7
1975	4.9	60.4	12.2	37.8	1.9	30.6	2.4	50.7	79.8	8.7	6.5	8.1	16.5	20.1	379.2
1976	4.3	56.6	13.5	43.2	2.4	35.3	3.1	52.1	81.3	7.4	5.4	6.9	6.0	21.1	383.0
1977	4.2	53.2	13.6	44.2	2.8	55.1	4.2	52.2	98.7	8.9	6.3	6.2	26.9	9.5	427.8
1978	2.5	45.6	14.3	63.2	2.3	52.0	2.7	55.9	112.7	10.8	4.5	9.8	20.9	23.2	454.8
1979	3.2	47.4	18.7	54.9	2.3	40.8	2.5	40.6	75.9	8.3	4.0	10.4	20.8	17.0	382.8
1980[1]	4.0	44.1	15.9	59.0	2.4	34.6	1.7	44.1	48.0	10.1	3.8	10.8	13.9	31.5	358.5
1981															

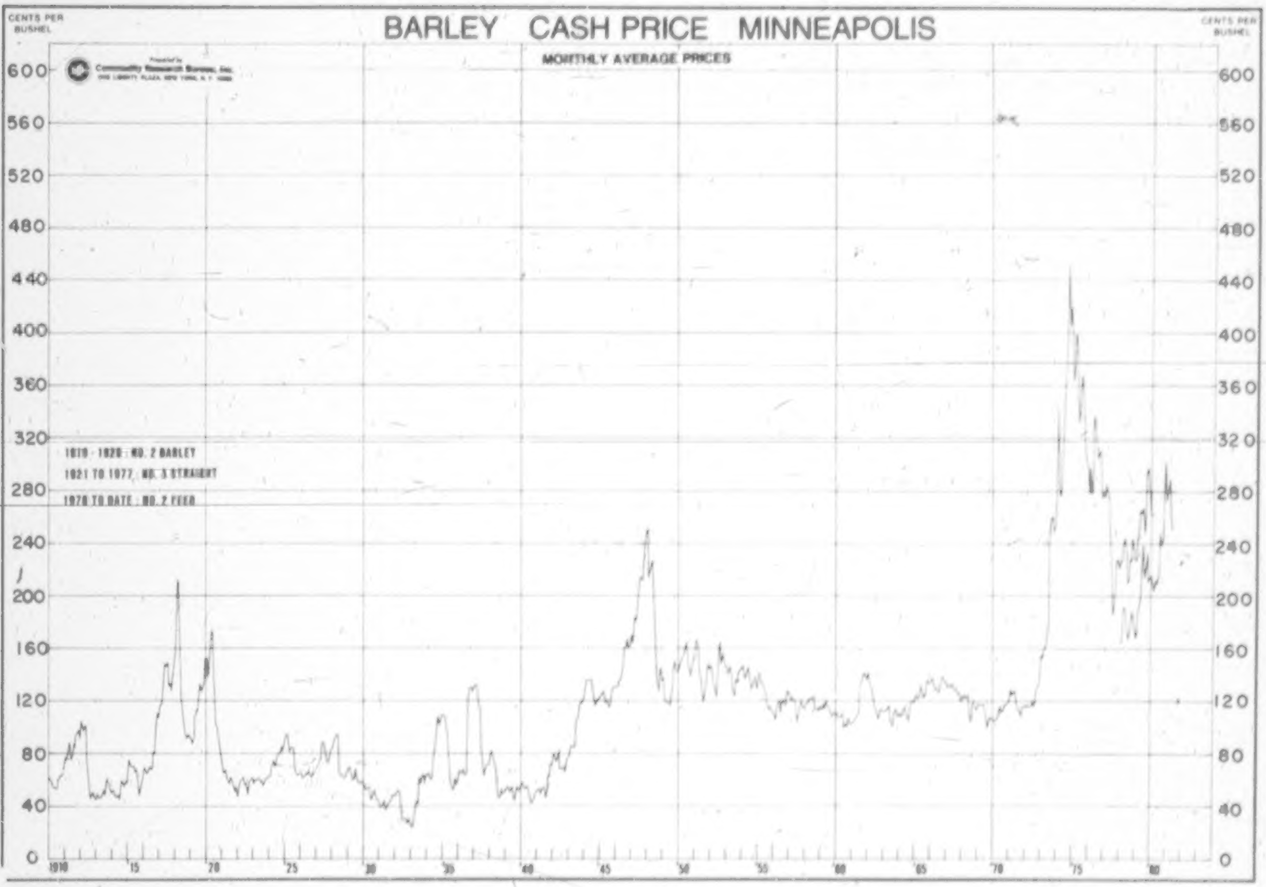
[1] Preliminary, December estimate. *Source: Crop Reporting Board, U.S.D.A.*

High, Low & Closing Prices of May Barley Futures at Winnipeg . In Dollars per Tonne

Year of Delivery		Year Prior to Delivery							Delivery Year					Life of Delivery Range
		June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	
1978	High	—	79.00	79.90	77.00	78.20	77.10	78.00	80.00	79.50	83.30	84.00	82.00	84.00
	Low	—	75.30	72.40	72.30	70.50	72.80	75.40	76.00	77.50	77.50	76.50	77.40	70.50
	Close	—	76.70	74.00	75.90	74.20	75.80	76.60	77.80	78.50	82.10	77.70	81.60	—
1979	High	—	73.80	74.00	74.80	80.20	78.50	77.40	80.00	81.90	84.00	93.20	106.40	106.40
	Low	—	72.00	71.50	70.90	74.50	74.70	75.40	76.50	78.20	80.00	82.10	93.00	70.90
	Close	—	72.00	71.80	74.50	77.50	76.60	76.50	78.40	81.10	82.50	92.60	101.30	—
1980	High	108.10	107.90	107.70	112.00	117.30	117.60	121.40	123.10	116.90	116.40	116.00	130.10	130.10
	Low	89.00	89.70	93.70	103.70	107.00	111.40	112.30	112.50	111.20	110.70	109.40	110.40	89.00
	Close	104.30	92.40	107.70	111.50	115.00	114.90	121.10	116.50	111.80	111.10	110.60	124.50	—
1981	High	131.50	139.50	139.60	143.50	150.30	165.00	166.50	162.90	156.90	153.30	153.90		
	Low	121.40	126.50	130.00	137.50	137.20	149.60	141.90	150.70	151.40	145.30	146.20		
	Close	128.00	138.10	139.50	141.60	149.30	164.00	160.80	150.80	151.60	146.80	153.90		

Source: Winnipeg Commodity Exchange

BARLEY



Average Cash Price of No. 2[2], Feed Barley, in Minneapolis In Cents Per Bushel

Year	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Average
1971–2	108	100	95	99	104	104	104	107	107	105	106	108	104
1972–3	105	96	98	111	110	114	127	134	120	119	125	136	117
1973–4	151	167	212	212	202	180	212	234	251	232	174	210	203
1974–5	236	236	269	248	307	317	289	282	259	226	224	205	258
1975–6	167	204	277	300	283	242	223	211	226	236	239	250	238
1976–7	262	245	248	268	246	221	205	220	235	229	228	213	235
1977–8	176[2]	163	150	158	166	165	165	165	165	166	191	190	168
1978–9	184	171	168	177	181	188	179	171	169	186	189	196	180
1979–0	216	239	215	222	234	211	215	209	204	206	212	209	216
1980–1[1]	215	248	239	243	277	303	275	281	290	263			
1981–2													

[1] Preliminary. [2] Prior to June 1977 prices are for No. 3 or better. *Source: Economic Research Service, U.S.D.A.*

Month End Open Interest of Barley Futures at Winnipeg In Units (20 Tonne)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	6,228	5,951	4,700	6,414	5,377	8,888	8,163	10,022	13,955	14,157	15,493	13,439
1979	16,704	18,864	18,579	23,142	17,635	23,336	26,643	25,193	24,230	20,466	22,107	21,40
1980	19,105	17,631	14,848	14,027	15,842	17,658	18,224	18,724	21,082	16,574	16,173	13,496
1981	14,560	13,335	13,836	16,380								

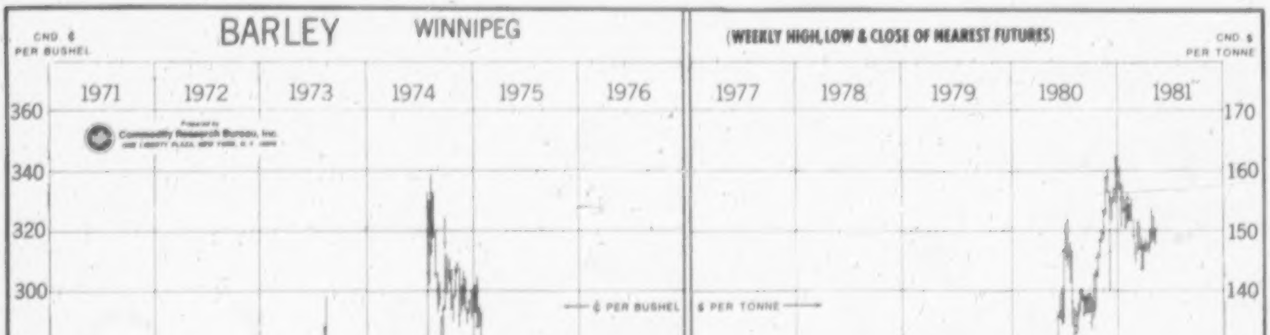
Source: Winnipeg Commodity Exchange

Salient Statistics of Barley in the United States In Millions of Bushels

Year & Periods Begin. June 1	Supply				Disappearance							Ending Stocks		
					Domestic Use									
	Beginning Stocks	Production	Imports	Total Supply	Food	Alc. Beverages	Seed	& Residual Feed	Total	Exports	Total Disappearance	Gov't. Owned[1]	Privately Owned[2]	Total Stocks
1975–6	92.2	379.2	15.7	487.1	8.6	124.8	15.7	185.7	334.8	23.9	258.7	—	128.4	128.4
1976–7	128.4	383.0	10.8	522.2	8.6	131.5	18.2	171.3	329.6	66.2	395.8	—	126.4	126.4
1977–8	126.4	427.8	9.4	563.6	8.6	133.1	16.7	174.9	333.3	57.2	390.5	—	173.1	173.1
1978–9	172.1	449.2	10.7	632.0	8.6	147.5	14.7	206.8	377.6	25.7	403.3	2.5	225.5	228.0
June–Sept.	172.1	449.2	2.8	624.1	2.9	52.5	1.2	77.7	134.3	18.8	153.1	.8	471.3	472.1
Oct.–Dec.	471.0	—	2.8	473.8	2.1	33.0	2.2	41.5	78.8	4.7	83.5	1.4	389.8	391.2
Jan.–Mar.	390.3	—	3.1	393.4	2.1	35.5	3.7	55.4	96.7	.8	97.5	2.3	294.1	296.4
Apr.–May	295.9	—	2.0	297.9	1.5	26.5	7.6	32.2	67.8	1.4	69.2	2.5	225.5	228.0
1979–0[3]	228.0	382.8	11.8	622.6	8.6	151.3	4.0	201.8	375.7	54.8	430.5	3.2	188.9	192.1
June–Sept.	228.0	382.8	3.7	614.5	2.9	51.9	1.1	86.9	142.8	9.9	152.7	2.9	458.9	461.8
Oct.–Dec.	461.8	—	2.8	464.6	2.1	34.0	2.0	38.5	76.6	22.4	99.0	3.1	362.5	365.6
Jan.–Mar.	365.6	—	3.2	368.8	2.1	37.4	3.4	52.5	95.4	11.1	106.5	3.3	259.0	262.3
Apr.–May	262.3	—	2.1	264.4	1.5	28.0	7.5	23.9	60.9	11.4	72.3	3.2	188.9	192.1
1980–1[4]	192.1	358.5	10.0	560.6	8.6	149.0	14.0	185.0	356.6	75.0	431.6			129.0
June–Sept.	193.1	358.5	3.5	354.1	2.9	56.6	1.0	77.9	138.4	24.9	163.3	3.5	387.3	390.8
Oct.–Dec.	390.8	—	2.3	393.1	2.1	35.0	2.0	30.1	69.2	21.4	90.6	3.5	299.0	302.5
Jan.–Mar.														
Apr.–May														

[1] Uncommitted inventory. [2] Includes quantity under loan & farmer-owned reserve. [3] Preliminary. [4] Estimate.

Source: Commolity Economics Division, U.S.D.A.



Bauxite

Bauxite production in the United States was estimated at 1.67 million tonnes in 1980, or about 150,000 tonnes lower than in 1979, with 79 percent of the total produced in Arkansas. Imports of dried and calcined bauxite totaled about 14.7 million tonnes, or slightly less than imports for the preceding year. Jamaica, Guinea, and Surinam, the principal source countries, supplied 85 percent of the U.S. imports. Imports provided 37 percent of the alumina supply.

Imports of alumina, the intermediate product between bauxite and aluminum, continued an upward trend begun in 1966, rising to 4.5 million tonnes, about 700,000 tonnes above the 1979 level. Over 78 percent of the imported alumina came from Australia, with Jamaica supplying an additional 17 percent. U.S. exports of alumina increased significantly in 1980 to 1.16 million tonnes.

Eight plants in the South Central States and one in the U.S. Virgin Islands used an estimated 92 percent of the total U.S. consumption of domestic and imported bauxite to make alumina, about 90 percent of which was reduced to aluminum metal. The remainder of the bauxite and alumina was used to make refractories, chemicals, abrasives, and other products. The net import reliance was 94 percent of apparent domestic consumption in 1980.

Apparent demand for primary aluminum metal in the United States is expected to increase at an average annual rate of about 5 percent through 1990 (from a 1978 base year). Demand for alumina is expected to increase at a slightly lower rate because of increased imports of the metal. Demand for bauxite is expected to increase at an even slower rate because of increased imports of alumina. On this score, industry analysts note that transportation costs favor such a trend and the building of smelter capacity in some developing countries to take advantage of the abundance of cheaper and more reliable power and closer access to sources of raw material.

Eleven of the major bauxite exporting countries belong to the International Bauxite Association, which was organized to increase revenues from and control over bauxite operations. Taxes on bauxite production in most of the countries supplying the U.S. have become the largest element in the cost of bauxite.

The U.S. government stockpile goal for metal-grade bauxite was increased to about 27.5 million tonnes in 1980, and the goal for alumina was eliminated.

World Production of Bauxite In Thousands of Metric[4] Tons

Year	Brazil	Guyana[3]	France	Guinea	Hungary	Indonesia	Australia	Malaysia	Greece	Surinam	U.S.S.R.[3]	Jamaica[3]	United States[3]	Yugoslavia	World Total
1970		4,347	2,945	2,451	1,990	1,210	9,110	1,121	2,256	5,257	4,200	11,820	2,082	2,066	56,873
1971		3,858	3,134	1,966	2,057	1,218	12,532	962	2,816	6,612	4,000	12,244	1,988	1,928	61,143
1972		3,291	3,203	2,018	2,321	1,256	14,209	1,059	2,398	7,654	4,100	12,345	1,812	2,162	64,021
1973		3,224	3,084	3,000	2,559	1,200	17,535	1,200	2,600	6,580	4,200	13,385	1,879	2,133	68,563
1974	845	3,200	2,892	7,480	2,708	1,270	19,679	933	2,739	6,600	4,200	15,086	1,949	2,333	78,362
1975	954	3,200	2,523	8,273	2,844	977	20,672	692	2,958	4,850	4,300	11,388	1,772	2,270	73,610
1976[4]	827	2,686	2,330	11,316	2,918	940	24,084	660	2,551	4,587	4,500	10,312	1,989	2,033	77,463
1977	1,120	2,731	2,059	11,300	2,949	1,301	26,086	616	2,949	4,856	4,600	11,433	2,013	2,044	82,374
1978[1]	1,160	2,400	1,990	12,000	2,899	1,008	24,293	615	2,899	5,025	4,600	11,736	1,669	2,566	81,029
1979[2]	2,400	2,400	2,000	12,500	3,000	1,000	27,583	700	3,000	5,000	4,600	11,574	1,821	3,012	86,814
1980[2]	2,700	2,200		13,000	3,000		27,800		2,900	5,000	4,600	11,400	1,670	3,100	87,370

[1] Preliminary. [2] Estimate. [3] Dry Bauxite equivalent of ore processed. [4] Data prior to 1976 are in THOUSANDS OF LONG TONS. *Source: Bureau of Mines*

U.S. Salient Statistics of Bauxite In Thousands of of Metric[6] Tons

Year	Net Import Reliance as a % of Apparent Consumption	Av. Price F.O.B. Mine $ per Ton	Production			Recovery of Processed Bauxite	Processed Bauxite Recovered[1]		Dry Equivalent			Stocks, Dec. 31			
			Crude	Dried Equivalent	Value ($1,000)	Crude Ore Treated	Total	Dried Equiv.	Imports[2]	Exports[3]	Consumption	Producers & Processors	Consumers	Govt.	Total
1970		7–10	2,522	2,082	30,070	428	259	343	12,620	3	15,673	966	2,263	18,020	21,249
1971		5–15	2,419	1,988	28,543	444	250	357	12,326	34	15,619	997	2,667	17,149	20,813
1972		5–15	2,200	1,812	23,238	399	210	319	12,601	29	15,375	791	2,797	16,453	20,041
1973		5–15	2,287	1,879	26,635	338	169	287	13,403	12	16,650	684	2,165	16,029	18,878
1974		5–15	2,370	1,949	25,663	348	177	279	14,976	16	16,904	534	3,982	15,152	19,669
1975[6]	91	5–15	2,199	1,801	25,083	361	182	287	11,714	20	12,587	494	5,293	15,308	21,094
1976	91	5–15	2,420	1,989	26,645	366	175	289	12,749	15	14,039	526	4,923	15,308	20,756
1977	91	5–15	2,436	2,013	27,555	419	169	294	12,989	26	14,528	685	7,264	15,087	23,036
1978	93	5–15	2,066	1,669	23,185	379	154	236	13,847	13	14,738	556	7,806	14,661	23,023
1979[4]	93	5–15	2,186	1,821	24,875	466	235	336	13,780	15	15,697	607	7,982	14,661	23,250
1980[5]	94	5–15		1,617					14,087	25		—8,600—			

[1] Calcined, or sintered. [2] Imports for consumption. "As shipped" basis. [3] Including concentrates. [4] Preliminary. [5] Estimate. [6] Data prior to 1975 are in THOUSANDS OF LONG TONS. *Source: Bureau of Mines*

Beer

United States Production of Beer (Fermented Malt Liquors) In Millions of Barrels (of 31 Wine Gallons[1])

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1968	9.05	8.57	10.11	10.84	11.48	11.37	12.30	11.37	9.86	10.10	8.46	8.90	122.41
1969	8.99	8.81	10.99	11.43	11.28	10.17	13.09	11.98	11.61	10.81	8.54	9.62	127.32
1970	9.56	9.31	11.84	12.45	12.45	13.40	12.38	11.33	11.01	10.28	9.30	9.82	133.12
1971	9.62	9.41	12.53	12.33	12.37	13.72	13.28	12.28	11.41	10.53	9.87	10.02	137.36
1972	9.96	10.38	12.62	12.53	13.25	14.21	13.18	13.06	11.41	11.24	9.93	9.59	141.34
1973	10.98	10.73	13.14	12.86	13.83	13.09	13.76	14.17	12.12	12.38	10.90	10.65	148.60
1974	12.19	10.98	13.05	13.09	14.71	15.04	15.75	14.61	12.67	12.28	10.71	11.11	156.20
1975	12.55	11.18	12.41	14.50	14.34	15.76	16.08	14.72	13.35	12.35	11.22	12.15	160.60
1976	12.44	11.89	11.86	13.69	15.18	15.76	16.54	16.10	14.31	13.42	11.29	11.19	163.66
1977	11.98	11.48	16.20	16.03	16.79	16.90	15.92	15.31	13.30	12.61	12.02	12.01	170.50
1978	12.87	12.71	15.86	15.63	16.56	16.88	16.74	17.61	14.62	14.01	12.71	12.87	179.66
1979	13.83	13.57	16.89	16.34	16.97	16.77	16.94	16.76	14.70	25.28	13.14	12.18	184.19
1980	14.64	14.72	16.56	16.36	17.97	17.93	18.72	17.02	16.29	14.95	13.02	13.32	191.48
1981													

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[1] "Wine gallon" or "gallon" is a U.S. gallon of liquid measure equivalent to the volume of 231 cubic inches.

Source: Internal Revenue Service

Tax-Paid Withdrawals of Beer (Fermented Malt Liquors) in the U.S.
In Millions of Barrels (of 31 Wine Gallons[1])

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.	Total
1968	7.58	7.48	8.95	9.45	10.19	10.30	11.58	10.76	9.11	9.28	8.26	8.48	111.42
1969	7.88	7.66	9.40	10.06	10.25	9.15	11.96	11.44	11.80	10.14	8.28	9.24	116.27
1970	8.47	8.04	10.35	10.66	11.45	11.90	11.87	10.79	10.38	9.62	8.77	9.74	121.86
1971	8.19	8.52	11.00	11.04	11.05	12.88	12.50	11.89	10.96	9.80	9.74	9.83	127.40
1972	8.62	9.09	11.69	11.09	12.41	13.12	12.22	12.89	10.89	10.61	9.92	9.27	131.81
1973	9.67	9.43	12.01	11.65	12.87	12.55	12.77	13.68	11.52	11.54	10.73	10.08	138.47
1974	10.97	9.87	11.82	11.74	13.76	13.86	14.73	13.89	12.09	11.59	10.42	10.74	145.46
1975	11.12	9.84	11.57	13.01	13.42	14.44	14.75	13.88	12.51	11.90	10.61	11.59	148.64
1976	10.86	11.00	10.99	12.91	13.59	14.16	15.01	14.86	13.44	12.22	10.52	10.83	150.39
1977	10.01	10.43	14.55	14.28	15.00	15.71	14.80	14.64	12.89	11.65	11.48	11.51	156.92
1978	10.69	11.01	14.18	13.60	15.00	15.82	15.29	16.28	13.72	12.99	12.04	11.57	162.71
1979	12.32	12.01	15.01	14.96	15.00	15.57	15.13	15.56	13.71	13.64	12.52	11.08	168.12
1980	12.54	12.49	14.08	14.33	16.19	15.81	17.08	15.35	14.51	13.53	12.51	12.38	170.81
1981													

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[1] "Wine gallon" or "gallon" is a U.S. gallon of liquid measure equivalent to the volume of 231 cubic inches.

Source: Internal Revenue Service

U.S. Stocks of Beer (Fermented Malt Liquors) at End of Month In Millions of Barrels (of 31 Wine Gallons[1])

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1968	11.52	11.94	12.36	12.88	13.17	13.51	13.03	12.64	12.54	12.48	11.92	11.56
1969	11.91	12.33	13.00	13.37	13.37	13.57	13.55	13.12	13.05	12.81	12.38	11.90
1970	12.43	12.99	13.46	14.13	14.20	14.69	14.18	13.76	13.45	13.22	12.96	12.26
1971	12.97	13.20	13.81	14.07	14.40	14.26	14.16	13.64	13.31	13.31	12.78	12.23
1972	12.97	13.64	13.82	14.51	14.45	14.40	14.49	13.76	13.54	13.36	12.77	12.44
1973	13.07	13.70	14.01	14.43	14.48	14.20	14.30	13.81	13.58	13.52	12.93	12.76
1974	13.17	13.56	13.92	14.32	14.31	14.47	14.33	14.04	13.72	13.53	13.04	12.58
1975	13.21	13.54	13.76	14.26	14.17	14.30	14.45	14.18	13.98	13.49	13.20	12.74
1976	13.39	13.33	13.31	13.06	13.53	13.89	14.03	13.91	13.60	13.69	13.48	11.94
1977	14.01	13.95	14.59	15.03	15.57	15.37	15.13	14.44	13.57	13.53	13.02	12.42
1978	13.92	12.02	14.50	15.01	14.97	14.57	19.81	14.33	14.01	13.71	13.50	13.76
1979	14.00	14.06	14.44	14.98	14.74	14.50	14.83	14.30	13.87	12.59	13.37	13.29
1980	13.33	13.83	14.84	15.31	17.44	15.43	14.72	14.45	15.01	14.18	13.94	13.96
1981												

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[1] "Wine gallon" or "gallon" is a U.S. gallon of liquid measure equivalent to the volume of 231 cubic inches.

Source: Internal Revenue Service

Bismuth

Domestic consumption of bismuth declined about 9 percent in 1980, to about 2.5 million pounds from 2.7 million pounds in 1979, according to preliminary data of the Bureau of Mines. Compared with 1979, consumption of bismuth for fusible alloys declined 22 percent, usage for metallurgical additives decreased 20 percent, and usage for pharmaceuticals remained about the same as in 1979. Consumption of bismuth for pharmaceuticals accounted for 50 percent of the total amount of bismuth used in 1980; metallurgical additives—23 percent; fusible alloys—25 percent; and other uses—2 percent.

Domestic production of bismuth is insignificant, being derived from the processing of intermediate metallurgical products, such as lead bullion, which contain bismuth as a minor constituent.

Virtually complete reliance upon imports, which are primarily in the form of refined metal, is expected to continue, as the U.S. does not have any important reserves currently in production. Imports of bismuth in 1980 were 2.4 million pounds, compared with 2.2 million pounds in 1979, according to preliminary U.S. Bureau of Mines data. The principal sources of imports were Mexico, which supplied 43 percent of the total U.S. imports; Peru—26 percent; the United Kingdom—7 percent; others—24 percent. Some bismuth is exported from the U.S. Canada took 65 percent of the sharply reduced exports of 140,000 pounds in 1980, vs. 427,800 pounds in 1979.

The domestic producer price for bismuth was quoted at $3 per pound through early August 1980, when it was lowered to $2.50 per pound. On October 1, the sole domestic producer of primary bismuth discontinued publishing its list price for bismuth. Dealer quotations began the year at $2.50 to $2.60 per pound, peaked at $2.95 to $3.10 per pound in January, then generally declined throughout the year to $2.15 to $2.25 per pound in early December. The continued overall price decline was due to an oversupply of bismuth, while demand decreased.

Consumer stocks of bismuth were estimated at 700,000 pounds at the end of 1980, compared with 630,000 pounds a year earlier. The Federal Emergency Management Agency announced, on May 2, 1980, an increase in the bismuth stockpile goal from 771,000 pounds to 2.2 million pounds. As of November 30, 1980, the stockpile inventory amounted to about 2.1 million pounds.

World Mine Production of Bismuth In Thousands of Pounds

Year	Romania (Ore)	Australia	Bolivia	Canada (Ore)	China (Ore)	France (Metal)	Rep. of Korea (Metal)	Yugoslavia (Metal)	Japan (Metal)	Mexico (Metal)	Peru (Metal)	Sweden (Ore)	U.S.S.R. (Metal)	World Total
1968	132	403	1,268	648	551	141	229	189	1,595	1,157	1,783	44	99	8,312
1969	180	441	1,338	579	550	137	245	226	1,531	1,336	1,500	33	110	8,289
1970	180	422	1,340	590	550	159	234	166	1,495	1,259	1,593	33	110	8,192
1971	180	564	1,504	271	550	170	214	202	1,790	1,257	1,415	33	120	8,330
1972	180	796	1,393	275	550	148	212	196	1,974	1,387	1,492	33	120	8,819
1973	180	1,001	1,297	71	550	126	218	121	1,900	1,290	1,262	33	120	8,205
1974	180	2,579	1,351	245	550	125	289	220	1,837	1,583	1,469	33	130	10,631
1975	180	1,861	1,348	345	550	123	249	122	1,436	1,003	1,354	33	130	8,776
1976	180	1,650	1,349	286	550	139	384	172	1,502	1,228	1,149	33	130	8,786
1977	180	2,054	1,508	363	550	115	295	164	1,538	1,607	1,290	33	140	9,868
1978	180	2,050	1,063	348	660	130	269	29	1,355	2,156	1,300	33	150	9,745
1979[1]	180	2,100	1,000	400	660	100	400	62	1,400	1,500	1,400	33	160	9,422
1980[2]		2,000	50	350			250		1,400	1,500	1,300			8,050

[1] Preliminary. [2] Estimate. *Source: Bureau of Mines*

U.S. Salient Statistics of Bismuth In Thousands of Pounds

Year	Bismuth Consumed, By Uses							Consumer Stocks Dec. 31[3]	Exports of Metal & Alloys	General Imports of Metallic Bismuth from			Price[1] $ Per Pound
	Experimental	Metallurgical Additives	Other Alloys[4]	Fusible Alloys	Pharmaceuticals	Other Uses	Total Consumption			Peru	Mexico	Total	
1968	.2	[5]	454.5	675.4	1,210.4	7.2	2,347.8	621.5	120.5	658.3	383.4	1,265.7	4.00
1969	.3	509.6	14.1	748.4	1,250.5	9.1	2,532.0	597.9	447.9	319.9	382.6	894.8	4.63
1970	.1	361.5	13.0	643.7	1,183.0	8.3	2,209.6	721.7	910.3	491.1	365.0	997.9	6.00
1971	26.2	362.5	17.4	514.2	724.6	3.8	1,648.7	1,107.2	71.2	191.7	251.6	848.7	5.26
1972	1.1	550.0	18.0	754.4	983.9	8.1	2,315.5	717.5	264.3	478.9	238.7	1,562.9	3.63
1973	—	830.9	15.2	932.6	1,117.6	9.8	2,906.2	540.8	151.1	488.8	357.8	2,683.7	4.92
1974	.3	668.9	21.4	748.6	838.1	6.6	2,284.0	596.8	329.9	459.2	292.5	1,893.7	8.41
1975	.7	416.2	26.0	401.9	553.3	7.9	1,406.0	451.3	128.9	140.6	161.8	1,331.2	7.72
1976	8.8	455.9	20.3	518.6	1,391.7	15.3	2,410.6	483.8	68.5	569.1	248.1	2,328.1	7.50
1977	.6	461.6	18.6	611.2	1,274.5	13.1	2,379.6	436.1	95.3	632.4	182.2	2,013.3	6.01
1978	.6	485.3	21.8	836.0	1,149.7	18.6	2,511.9	781.9	96.3	334.7	535.3	2,657.8	3.38
1979[2]	3.2	703.8	22.0	721.0	1,248.7	28.5	2,727.2	533.3	427.8	648.7	604.8	2,167.3	3.01
1980[4]								700	140			2,400	

[1] N.Y., average ton lots. [2] Preliminary. [3] Prior to 1970 data are for consumer & dealer. [4] Estimate. [5] Included in Other Uses.
Source: Bureau of Mines

Broilers

Output of federally inspected broiler meat for 1980 in the U.S. totaled a little over 11 billion pounds, ready-to-cook (RTC) weight, up 2 percent from the 1979 level despite persistent, hot weather in the summer which resulted in the loss of many chickens. The hot weather also reduced rates of weight gain, hatchability (the ratio of the number of chicks placed to the number of eggs set in incubators), and the rate of lay in the reduced hatchery supply flocks. Broiler prices increased as a result.

U.S. exports of broilers increased significantly in 1980, despite continued intense competition from other suppliers. About 5 percent of total U.S. broiler marketings in 1980 were accounted for by exports. The Arabian Peninsula (whose major poultry-meat importer by far is Saudi Arabia, followed by North Yemen) is considered a promising export market for U.S. poultry meat. Major suppliers to this market include Brazil, the European Community (EC), and Eastern Europe. In 1980, the U.S. held only about 8 percent of this market. However, prospects for expanded U.S. broiler exports to the Arabian Peninsula in 1981 were enhanced by the expected diversion by other exporters of some supplies to the USSR.

Futures Markets

Broiler futures are traded on the Chicago Mercantile Exchange and on the Chicago Board of Trade.

Average Wholesale Broiler Prices Delivered at Chicago[1] (Grade A) In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Avg.	9-City Weighted Avg.[3]	Hens[4] 8–16 Lbs. RTC (Chicago)[2]
1970	28.2	27.2	27.7	26.4	26.5	26.1	25.9	25.4	26.0	24.6	25.5	24.8	26.2	26.41	40.8
1971	26.1	27.1	26.7	26.4	28.2	29.1	30.0	27.6	27.0	25.4	24.4	24.1	26.8	27.16	41.0
1972	26.7	28.0	27.8	25.6	26.7	28.2	29.8	28.4	29.6	28.1	27.3	28.2	27.9	28.14	41.4
1973	32.5	36.0	40.9	44.2	41.0	41.3	47.1	60.0	48.1	39.9	34.8	36.6	41.6	42.17	59.6
1974	39.3	39.8	38.5	36.4	35.5	33.8	36.3	36.7	39.8	39.0	41.8	40.2	38.1	38.25	56.0
1975	42.8	40.9	40.2	39.8	42.3	46.9	50.9	49.6	49.6	47.2	45.6	41.7	44.8	45.07	63.3
1976	41.7	42.6	41.6	40.9	42.0	41.7	43.3	41.4	39.8	36.2	34.9	35.0	40.1	40.21	59.7
1977	38.7	41.4	42.0	41.1	41.8	42.7	43.8	41.9	40.6	38.8	36.9	35.9	40.5	40.81	53.1
1978	40.0	42.8	41.9	46.1	45.5	50.1	50.2	43.3	44.4	41.5	41.7	42.0	44.1	44.50	65.6
1979	45.4	48.7	47.1	46.7	49.0	45.3	41.4	39.0	39.3	36.4	42.7	45.5	43.9	44.40	67.3
1980	45.1	42.2	39.9	38.1	40.7	42.7	52.7	51.7	54.6	51.0	48.9	48.2	46.3	46.80	62.6
1981															

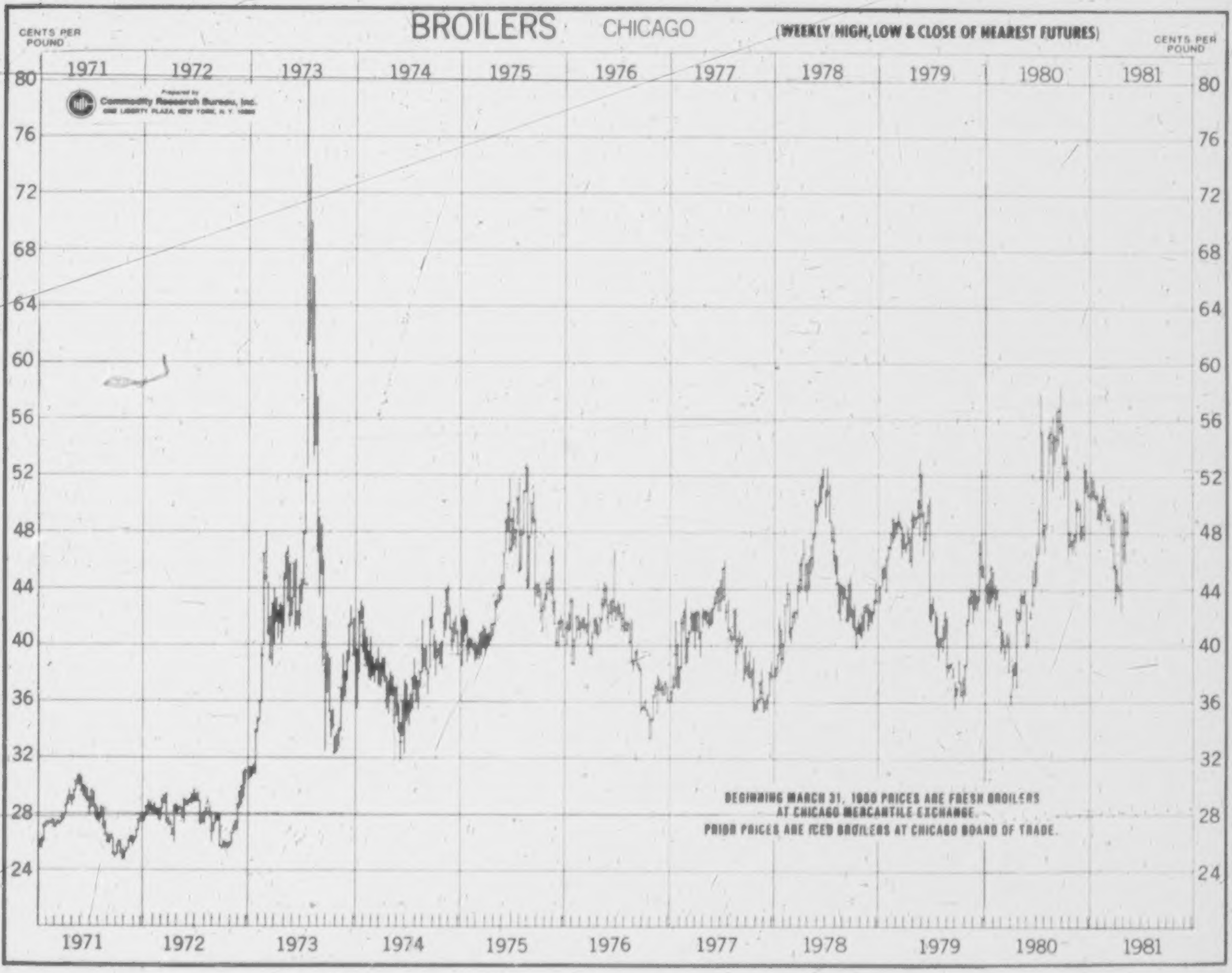
[1] Trucklots (U.S. & plant). [2] Ice packed, ready-to-cook. [3] In retail stores (urban areas), whole or cut-up ready to cook. [4] Prior to 1977 prices are for frying chicken. *Source: Bureau of Labor Statistics*

Broiler Supply and Prices in the United States

Year & Quarters	Federally Inspected Slaughter				Total Production RTC[2] (Mil. Lbs.)	Per Capita Consumption (Lbs.)	Prices (Cents/Lb.)	
	Number (Mil.)	Avg. Wt. (Lbs.)	Liveweight Pounds (Mil. Lbs.)	Certified RTC Wt. (Mil. Lbs.)			Farm	City
1976	3,253	3.81	12,408	8,987	9,067	40.4	23.1	40.2
1977	3,334	3.82	12,741	9,227	9,418	41.7	23.5	40.8
I	782	3.82	2,985	2,156	2,201	9.8	23.5	40.9
II	869	3.80	3,305	3,399	2,447	10.8	24.4	42.3
III	884	3.78	3,340	2,424	2,474	10.9	24.6	42.4
IV	798	3.90	3,110	2,248	2,296	10.2	21.5	37.6
1978	3,517	3.88	13,656	9,883	10,129	44.5	26.4	44.5
I	831	3.88	3,226	2,327	2,385	10.5	24.2	41.8
II	1,011	3.90	3,936	2,547	2,610	11.6	28.7	47.6
III	1,009	3.92	3,951	2,567	2,630	11.5	28.0	46.6
IV	917	4.02	3,683	2,443	2,504	10.9	24.7	42.1
1979	3,843	3.93	15,111	10,916	11,188	48.5	26.0	44.4
I	907	3.90	3,541	2,551	2,616	11.4	28.5	47.5
II	1,011	3.90	3,936	2,844	2,914	12.8	28.2	47.7
III	1,009	3.92	3,951	2,855	2,926	12.7	23.6	40.8
IV	917	4.02	3,683	2,665	2,732	11.6	23.8	41.7
1980[1]	3,881	3.94	15,277	11,089	11,348	48.1	27.8	46.8
I	950	3.96	3,759	2,722	2,789	12.0	25.6	43.0
II	1,016	3.96	4,027	2,923	2,993	12.6	23.5	41.1
III	991	3.83	3,796	2,759	2,821	11.9	31.8	53.3
IV	924	4.00	3,695	2,685	2,745	11.5	30.5	49.9
1981								
I[3]				2,780				51–52

[1] Preliminary. [2] Total production equals fed. inspec. slaughter plus other slaughter minus cut-up & further processing condemnation. [3] Forecast. *Source: Commodity Economics Division, U.S.D.A.*

BROILERS



Salient Broiler Statistics in the United States

Year	Commercial[2] Production: Number Millions	Commercial[2] Production: Live-weight Mil. Lbs.	Average: Live-weight Per Bird Lb.	Average: Farm Price ¢ Lb.	Value of Production Mil. $	Young Chickens Civilian Disappearance (Mil. Lbs.)	Total Chickens[3] Supply & Distribution (In Millions of Pounds): Commercial Broilers	Other Chickens	Total	Storage Stocks Jan. 1	Exports & Shipments	Consumption: Military	Consumption: Civilian
1968	2,620	9,326	3.56	14.2	1,326	1,737	6,653	769	7,422	170	162	100	7,233
1969	2,789	10,048	3.60	15.2	1,531	1,835	7,175	732	7,907	97	166	88	7,640
1970	2,987	10,819	3.62	13.6	1,475	1,958	7,687	778	8,465	110	182	69	8,161
1971	2,945	10,818	3.67	13.8	1,487	1,974	7,724	792	8,516	163	202	75	8,253
1972	3,075	11,480	3.73	14.1	1,623	2,039	8,147	740	8,887	149	206	52	8,667
1973	3,009	11,220	3.73	24.0	2,690	1,985	8,025	736	8,761	111	203	47	8,476
1974	2,993	11,320	3.79	21.5	2,436	2,044	8,126	789	8,915	146	235	34	8,617
1975	2,950	11,096	3.76	26.3	2,915	2,035	8,127	696	8,823	175	273	39	8,572
1976	3,283	12,517	3.81	23.6	2,953	2,262	9,067	684	9,751	114	451	33	9,226
1977	3,400	12,993	3.82	23.6	3,067	2,315	9,418	700	10,118	155	481	26	9,627
1978	3,516	13,656	3.88	26.4	3,682	2,400	10,129	665	10,794	139	505	32	10,294
1979[1]	3,843	15,111	3.93	26.0	4,031		11,188	732	11,920	102	597	33	11,250
1980[1]	3,881	15,277	3.94	27.8	4,304		11,348			142			
1981[1]										136			

[1] Preliminary. [2] Beginning 1970 data are for the marketing year starting Dec. 1 through Nov. 30. [3] Ready-to-cook basis.

Source: Economic Research Service, U.S.D.A.

Burlap and Jute

In 1979/80, production of jute and kenaf in the world's major producing countries of Bangladesh, India, and Thailand was estimated to have totaled 3,023,000 tonnes vs. the 1978/79 revised outturn of 2,989,000 tonnes. The gain in production was largely due to an increase in area harvested. The outlook for 1980/81 was for a drop of approximately 18 percent to 2,476,000 tonnes because of increased carryover stocks, weakened international demand, and greater profit expected from alternative crops.

Production of raw jute in Bangladesh during 1979/80 (July–June) was estimated at 1,210,471 tonnes (6.72 million bales) compared with 1,168,929 tonnes (6.49 million bales) in 1978/79.

The projected 1980/81 Bangladesh production was 816,475 tonnes, down 33 percent from the 1979/80 level, as area planted to jute decreased nearly one-third from that of 1979/80. This sharp reduction stemmed from growers' disinterest in jute as they encountered price resistance among buyers for their previous crop because of weakened international demand.

In India, the total area planted to jute in 1979/80 decreased less than one percent from 1978/79 levels. Kenaf area in Thailand in 1979/80 declined 19 percent from the previous season's level because of growers' expectations of greater profits from alternative crops, especially cassava. Exports by Bangladesh of raw jute in 1979/80 totaled 357,073 tonnes, up 80 tonnes from 1978/79. Of the 50 export destinations in 1979/80, the People's Republic of China (PRC) was the largest market, taking some 37,927 tonnes (22 percent below the previous year's level), followed by the United Kingdom 37,314 tonnes, the USSR, 29,322 tonnes; and Pakistan, 27,820 tonnes.

Although India's raw jute exports increased by some 300 percent, the total volume was small in comparison, totaling 36,000 tons (200,000 bales). Because of India's large stocks carryover of 553,554 tonnes, and an expected good crop in 1980/81, the Jute Corporation of India (JCI) was empowered to export any quantity or grade of raw jute without restriction.

U.S. jute and kenaf 1980 imports, primarily of raw fiber, totaled 9,476 tonnes. They were down 57 percent in volume from shipments of 21,961 tonnes in 1979. Bangladesh, India, and Thailand are the principal U.S. suppliers of jute and kenaf and finished products made from them. The U.S. also imported 175,736 tons of manufactured jute products in 1980. This was 19 percent below the volume registered in 1979. The decline in volume occurred in nearly all jute manufactured and raw product categories.

Jute carpetbacking cloth (CBC) continued in 1980 as the largest single jute import, totaling 91,303 tonnes vs. 122,579 tonnes in 1979. The reduction in volume reflected the increasing inroads made by competitively priced synthetic substitutes for jute CBC. Most U.S. carpetbacking imports are now for secondary backing, as the bulk of the market for primary backing has been taken over by synthetics.

Jute and Kenaf Production In Thousands of Metric Tons[3]

Crop Year	Jute		Kenaf (Mesta)	
	Bangladesh[4]	India[4]	India[4]	Thailand[5]
1969–70	2,809	2,262	452	725
1970–1	2,563	1,959	498	661
1971–2	1,702	2,256	456	820
1972–3	2,579	1,975	461	960
1973–4[3]	1,080	1,116	266	570
1974–5	720	805	245	400
1975–6	782	800	265	308
1976–7	877	964	314	183
1977–8	972	961	320	246
1978–9	1,169	—1,500—		320
1979–0[1]	1,210	—1,553—		260
1980–1[2]	816	—1,440—		220

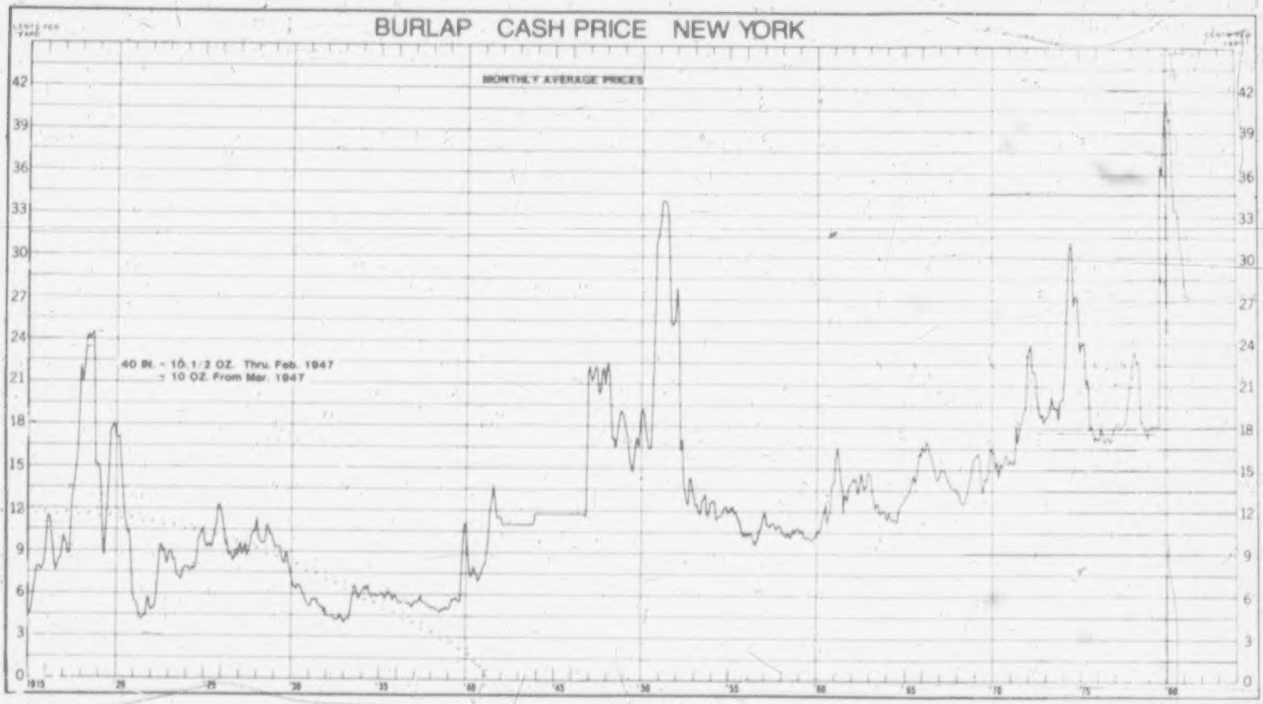
[1] Preliminary. [2] Estimate. [3] Data prior to 1973 are in MILLIONS OF POUNDS. [4] July–June year. [5] Sept.–Aug. year.
Source: Foreign Agricultural Service, U.S.D.A.

U.S. Imports of Jute[2] & Major Cordage Fibers[2] In Thousands of Metric[6] Tons (Product Weight)

	Jute										Cordage Fibers				
	Manufacturing						Raw[1]								
Year	Jute Fabric, Under 100 in.	Carpet-Backing	Jute Bags	Yarns, Roving & Cordage	Cotton Bale Covers	Total	Jute, Butte & Waste	Jute Fiber, N.E.S.	Total Raw	Total Jute	Harvest Twine[3]	Other Cordage[4]	Raw Fibers[5]	Batting, Sisal & Henequen	Total Cordage Fibers
1970	162.6	146.8	1.1	3.9	59.5	373.8	12.6	16.6	29.2	403.0	113.3	20.8	79.8	5.2	219.1
1971	139.8	190.2	1.2	1.5	50.1	382.8	4.4	12.7	17.2	399.9	128.7	20.6	77.1	1.4	227.7
1972	121.2	197.6	.6	5.8	74.3	399.5	4.1	9.0	13.2	412.7	124.3	22.8	70.2	7.8	225.1
1973	124.2	177.8	1.6	6.2	81.0	390.8	17.0	13.9	30.9	421.7	111.9	20.6	52.4	8.4	193.3
1974[6]	102.4	170.7	1.1	6.0	94.1	374.2	7.3	21.0	28.3	402.5	151.8	20.9	47.0	2.0	221.8
1975	74.3	107.9	1.1	12.0	33.5	228.9	8.5	12.8	21.3	250.2	79.8	16.7	27.4	1.0	125.0
1976	93.3	135.2	1.5	6.7	17.0	276.7	8.6	12.4	21.0	297.7	102.4	17.6	22.2	3.0	159.7
1977	88.7	152.7	1.8	2.3	21.1	279.7	6.8	6.1	12.9	292.6	94.8	19.0	38.7	3.8	156.3
1978[7]	87.0	132.5	4.8	2.2	26.5	265.5	10.8	6.2	17.0	282.5	81.4	15.8	44.0	3.5	144.7
1979[7]	76.4	122.6	2.1	2.4	8.6	216.0	9.3	12.0	22.0	238.0	113.1	15.1	33.0	1.4	162.6

[1] Includes some Kenaf, raw & contained in mfg. products. [2] Manufactured & raw. [3] Baler & Binder twine. [4] Industrial twine, cordage (abaca, sisal & henequen). [5] Sisal, Henequen & Abaca. [6] Prior to 1974 data are in THOUSANDS OF LONG TONS. [7] Preliminary. *Source: U.S. Dept. of Commerce*

BURLAP AND JUTE



Average Wholesale Price of Raw Jute, Bang Tossa C., Landed, at New York In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1969	18.9	18.9	18.9	18.9	18.9	18.9	18.9	16.4	16.4	16.1	16.1	16.4	17.8
1970	16.4	16.4	16.4	16.6	16.9	17.1	17.1	16.2	16.5	16.5	16.5	16.5	16.6
1971	16.5	16.8	16.8	16.8	16.8	17.1	17.5	17.5	17.7	17.9	17.9	18.5	17.3
1972	N.A.	18.5	N.A.	N.A.	19.7	19.7	17.8	17.8	17.8	17.8	17.8	N.A.	18.4
1973	17.3	17.6	17.6	18.3	18.3	N.A.	18.9	18.8	18.8	18.8	18.2	18.2	18.3
1974	N.A.	N.A.	N.A.	N.A.	N.A.	19.5	19.5	21.5	N.A.	N.A.	25.8	27.8	22.8
1975	27.8	27.8	27.8	27.3	27.8	23.3	N.A.	23.3	N.A.	23.3	N.A.	20.3	25.5
1976	20.4	19.8	20.4	20.9	20.9	20.2	19.7	19.7	19.7	19.7	19.7	19.7	20.1
1977	20.2	20.2	21.4	21.4	21.4	N.A.	21.9	21.9	21.9	22.1	22.6	N.A.	21.5
1978	N.A.	N.A.	28.3	28.3	27.3	26.8	26.8	26.8	26.0	26.0	26.0	26.0	26.8
1979	26.0	26.0	26.0	25.8	26.0	26.0	25.8	N.A.	32.7	32.7	32.7	32.7	28.4
1980	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	29.0	28.5	29.0	29.0	28.8
1981	29.0	29.0											

Source: Bureau of Labor Statistics (0155-0231.01)

Average Wholesale Price of Burlap (40 Inch—10 Oz.) at New York In Cents Per Yard

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1969	15.9	16.1	15.0	14.5	13.4	13.9	14.4	14.3	14.7	16.0	16.6	16.2	15.1
1970	16.3	15.1	15.6	14.5	15.5	15.2	15.4	16.0	16.1	15.4	15.4	15.7	15.5
1971	15.4	15.5	15.3	18.3	16.9	18.1	18.4	18.4	19.0	19.3	19.4	23.2	18.1
1972	23.6	23.8	22.0	22.0	21.8	20.3	19.5	19.0	18.8	19.0	18.4	18.8	20.6
1973	18.8	18.9	19.3	20.3	19.9	19.4	19.4	19.4	18.7	18.7	20.0	20.0	19.4
1974	21.5	23.6	26.3	29.5	31.1	31.1	26.7	27.2	27.4	27.3	25.8	23.5	26.8
1975	24.0	24.1	23.8	21.1	21.5	20.6	17.9	18.2	17.6	17.1	17.4	N.A.	20.3
1976	17.2	18.1	17.9	17.4	17.0	17.2	17.4	17.2	17.0	17.4	17.8	18.0	17.5
1977	N.A.	18.3	18.3	18.0	N.A.	18.3	18.3	19.0	19.6	27.0	21.2	22.8	20.1
1978	23.2	23.4	22.6	22.9	18.4	18.5	18.0	18.0	18.0	17.3	18.0	18.0	19.7
1979	18.1	18.1	18.1	18.1	18.1	18.1	N.A.	35.4	36.7	36.0	40.3	41.5	27.1
1980	N.A.	39.8	40.0	38.5	N.A.	N.A.	N.A.	N.A.	33.5	33.5	N.A.	33.0	36.4
1981	N.A.	27.35											

Source: Bureau of Labor Statistics (0337-0461.01)

Butter

U.S. 1980 butter production increased 16 percent from 1979 to 1,142 million pounds. Utilization of milk for butter production in 1980 increased 3.1 billion pounds from 1979. With increased milk supplies for manufacturing considered likely in 1981, butter output is expected to increase. Commercial use of butter in 1980 declined more than 2 percent to 875 million pounds from 895 million in 1979. Commercial stocks of butter increased over the first three quarters of 1980, with September 30, 1980 stocks of butter totaling 44.1 million pounds before declining by year's end to 37.0 million pounds vs. 25.0 million at year's end in 1979. Commercial stocks at the end of February 1981 stood at 41.8 million pounds.

U.S. Government Price Support

The CCC purchase offers of butter, based on the milk support price, attracted large amounts of butter during 1980. Government stocks rose to 267.7 million pounds at the end of 1980 vs. 152.6 million at the end of 1979. CCC purchases of butter during January and February 1981 amounted to 100.9 million pounds, a 172 percent increase from the 37.1 million pounds purchased in the same period in 1980.

As a result of the increasing cost of CCC butter purchases and storage, the Reagan administration sought and received legislation to remove the requirement that the milk support price be raised semi-annually. Consequently, on March 31, 1981 the Secretary of Agriculture announced that the milk support price would not be raised on April 1, 1981. In another action, the Secretary of Agriculture also announced that the "sell back" price for dairy products (for unrestricted use) acquired under the support program would be increased from 105 percent of the purchase price to 110 percent. This action would have the effect of increasing the cost to commercial users utilizing the CCC stocks for their own storage purposes in a period of high carrying costs. The USDA expected that the net effect of this action would be an increase in commercial stocks.

World Trends

Worldwide butter production in 1981 may show little change from the 6.1 million tonnes manufactured in 1980. Consumption in 1981 is expected by the USDA to decline 1 to 2 percent. Aggregate stocks of the world's 35 major dairy countries may grow 5 to 6 percent. EEC butter production in 1980 totaled almost 2.0 million tonnes, about the same as 1979. EEC butter exports were up sharply in 1980 and included 70,000 tonnes of subsidized butter shipments to the Soviet Union. Stable production and increased exports resulted in a 28 percent decline in EEC butter stocks during 1980. Because of the decline in EEC butter stocks, world stocks declined in 1980 despite the sizable increases in U.S. butter production and stocks. The Soviet Union's butter production totaled 1.35 million tonnes in 1980, a 4 percent decline from 1979. A similar decline is expected to occur in 1981. In early May 1981, unconfirmed rumors concerned a possible sale of sizable amounts of CCC butter to the Soviet Union at subsidized prices. If true, such a sale would help to diminish burdensome stocks in the U.S. and help meet the Soviet Union's butter production shortfall.

New Zealand, the world's lowest-cost milk producer, enjoyed exceptionally favorable weather conditions in 1980. Normal weather conditions in 1981 would result in a 4 to 5 percent decline in milk production and thus lower butter production.

Supply and Distribution of Butter in the United States In Millions of Pounds

	Supply					Distribution								Wholesale Prices	
	Production					Domestic Disappearance				Dept. of Agr.[5]				Calif. AA	Chi. AA
						Civilian								$ Lb.	
Year	Creamery	Farm	Total	Cold Storage Stocks[1] Jan. 1[2]	Imports	Total	Per Capita —Lbs.—	Military	Exports & Shipments[4]	Jan. 1 Stocks	Dec. 31 Stocks	Removed by U.S.D.A. Programs	Total Use		
1968	1,165	11	1,175	169	2	1,115	5.7	72	40	150	103	195	1,228		
1969	1,118	8	1,126	117	2	1,079	5.4	50	27	103	64	188	1,156		
1970	1,137	6	1,143	89	2	1,061	5.3	45	9	64	99	246	1,115		
1971	1,144	3	1,147	119	2	1,040	5.1	32	99	99	71	292	1,171		
1972	1,102	—	1,102	97	2	1,017	4.9	23	54	71	96	234	1,094		
1973	919	—	919	107	56	999	4.8	9	17	96	23	98	1,025	.8397	—
1974	962	—	962	57	2	956	4.3	9	7	23	15	33	972	.8042	.6609
1975	984	—	984	49	2	1,012	4.4	9	3	15	5	63	1,024	.9729	.7941
1976	979	—	979	11	2	934	4.3	7	4	5	19	39	945	1.100	.9326
1977	1,086	—	1,086	47	2	941	4.0	5	4	19	151	222	950	1.1366	.9865
1978	994	—	994	185	2	966	4.1	3	5	151	192	112	974	1.2666	1.1058
1979	985	—	985	207	2	1,005	4.2	6	5	192	153	82	1,016	1.4327	1.2374
1980[3]	1,142		1,142	178	2	1,009	4.1	4	4	153	268	257	1,017		—
1981[3]				305						268					

[1] Commercial. [2] Includes stocks held by U.S.D.A. [3] Preliminary. [4] Includes U.S.D.A. shipments to Territories. [5] Includes butteroil. *Source: Department of Agriculture*

BUTTER

World (Total) Butter[1] Production In Thousands of Metric Tons

Year	Australia	Canada	China	Argentina	Denmark	France	Ireland	W. Germany	Netherlands	N. Zealand	India	Sweden	U.S.S.R.	South Africa	Un. Kingdom	United States
1971	203	131		37	124	474	76	471	124	230	*73*	46	1,022	44	66	520
1972	195	132		49	136	540	77	497	163	246	*Avg.*	56	1,081	45	95	500
1973	185	115		38	146	550	87	513	169	242	*(432)*	56	1,200	38	96	417
1974	175	106		35	137	543	75	511	172	216	439	59	1,260	32	52	436
1975	161	129		40	139	556	86	521	204	230	451	56	1,231	26	48	445
1976	148	114	92	40	139	550	103	544	202	251	455	61	1,408	26	89	444
1977	118	113	94	30	131	551	105	535	179	263	457	61	1,500	21	134	493
1978	112	102	94	29	140	553	130	564	211	230	460	63	1,472	16	161	451
1979[2]	105	98	95	32	131	578	131	568	202	251	465	65	1,416	18	161	447
1980[3]	85	103	95	31	118	605	127	585	195	225	470	67	1,345	16	177	500

[1] Factory (including creameries and dairies) & farm. [2] Preliminary. [3] Forecast. *Source: Foreign Agricultural Service, U.S.D.A.*

Production of Creamery Butter in Factories in the United States In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1971	102.6	97.7	111.2	112.3	118.2	112.6	89.4	81.1	69.5	79.9	79.3	89.9	1,144
1972	99.9	99.9	106.9	108.0	117.9	110.0	87.7	75.0	66.4	75.2	73.5	81.6	1,102
1973	95.2	84.4	91.4	91.8	99.9	87.1	67.7	56.6	51.1	63.4	60.3	69.5	918.6
1974	83.0	71.4	76.8	90.3	102.2	95.2	80.8	70.4	63.9	70.7	67.3	89.6	961.7
1975	100.5	90.8	98.1	103.2	101.9	88.3	69.2	57.7	58.0	68.2	64.0	83.8	983.8
1976	92.5	85.0	90.0	87.0	91.4	83.9	71.5	65.1	64.0	78.1	77.6	92.5	978.6
1977	105.5	95.4	98.4	99.9	103.2	93.0	81.8	77.8	75.0	84.5	81.5	89.5	1,086
1978	107.3	95.5	98.2	97.2	97.6	85.1	71.4	63.2	64.0	70.6	66.5	77.7	994.3
1979	98.4	86.7	89.8	92.4	99.2	83.0	72.5	64.3	60.5	78.0	75.8	84.0	984.6
1980[1]	103.8	99.1	101.7	111.1	116.4	93.8	85.0	77.7	77.2	89.6	84.9	101.7	1,142
1981[2]	121.3												

[1] Preliminary. [2] Estimate. *Source: Crop Reporting Board, U.S.D.A.*

Commercial Disappearance of Creamery Butter in the U.S. In Millions of Pounds

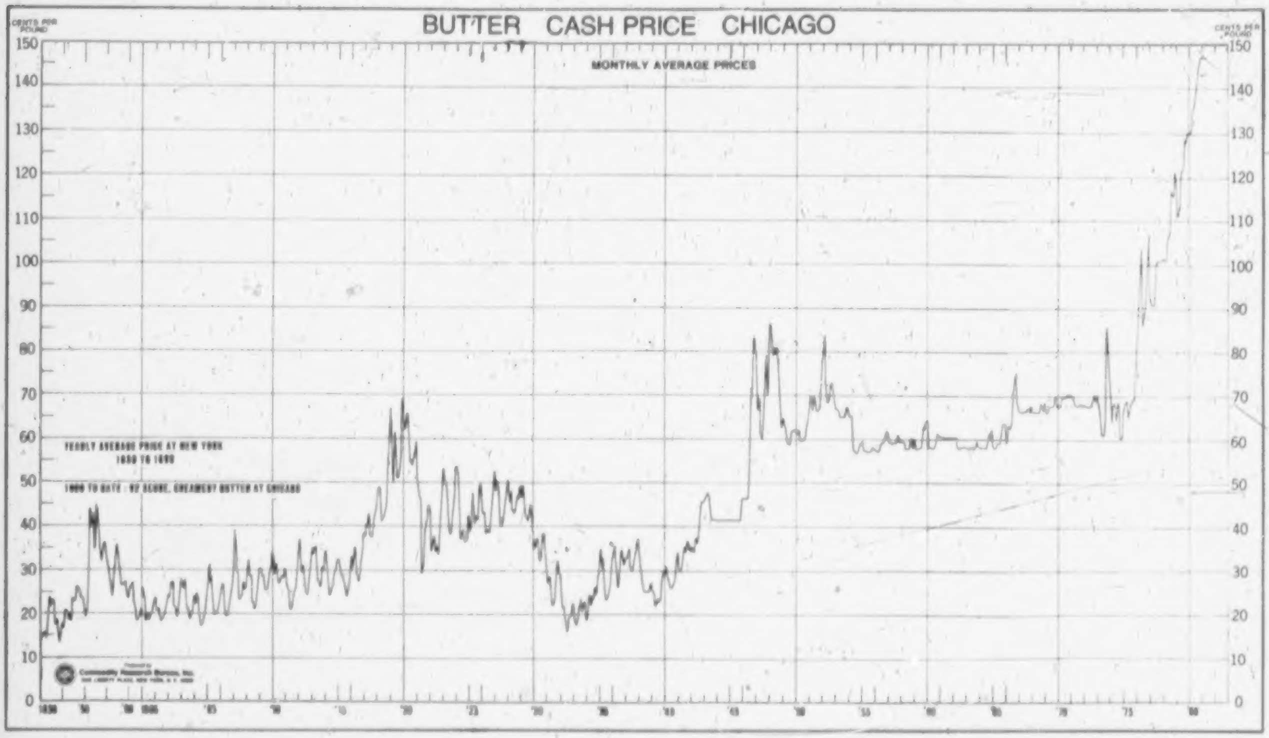
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1970	86.4	63.5	89.5	70.2	68.6	64.0	68.9	65.5	77.9	81.0	73.3	87.2	898.2
1971	74.2	59.0	50.7	98.5	73.3	55.5	62.4	68.6	70.4	67.1	70.4	94.3	847.1
1972	81.1	59.5	80.0	70.5	72.8	63.1	68.5	72.0	73.4	76.1	82.1	85.1	885.4
1973	65.2	63.6	66.6	82.3	75.0	68.7	58.2	70.6	59.3	72.1	113.9	76.5	855.6
1974	79.6	61.6	69.0	68.2	78.4	70.7	72.0	76.6	73.8	93.4	88.9	93.4	929.9
1975	92.9	70.4	91.4	84.9	78.1	76.6	72.7	77.9	66.5	78.6	71.4	85.1	947.7
1976	94.5	77.2	74.8	74.6	66.5	72.8	70.0	64.0	77.5	81.3	82.6	82.2	919.0
1977	71.9	53.9	83.6	65.0	56.3	44.8	71.6	72.8	89.1	81.5	74.0	94.3	859.8
1978[1]	68.1	65.9	92.0	79.2	61.0	77.5	68.7	69.8	83.8	72.8	77.4	87.4	903.5
1979[1]	83.1	78.3	88.5	70.7	64.2	68.1	72.5	66.2	63.4	78.4	84.4	78.7	895.0
1980[1]	75.0	86.1	90.3	46.5	55.9	60.0	77.1	73.9	77.4	64.8	79.8	89.0	874.3
1981													

[1] Preliminary. *Source: Economic Research Service, U.S.D.A.*

Cold Storage Holdings of Creamery Butter in the U.S., on First of Month In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1970	88.6	77.4	81.3	91.1	114.2	146.7	186.0	203.5	198.0	171.3	147.5	134.3
1971	118.8	119.3	134.1	157.9	180.4	209.8	235.1	251.2	246.8	222.0	188.9	155.0
1972	96.8	81.8	93.3	110.1	128.5	159.1	195.9	210.7	198.4	178.4	154.7	132.5
1973	107.5	109.9	110.0	117.2	125.1	139.4	150.2	143.8	113.2	94.3	67.5	54.3
1974	46.4	51.4	50.8	58.1	79.0	97.4	117.5	130.7	122.0	105.6	83.1	58.0
1975	49.2	53.7	61.3	60.5	66.7	85.1	99.6	97.8	78.9	39.6	27.1	15.1
1976	10.9	9.3	16.5	31.1	44.0	69.5	80.9	83.0	82.3	68.1	60.7	47.3
1977	47.1	67.6	94.2	106.3	128.3	163.8	197.1	209.0	208.6	203.3	195.4	193.4
1978	184.9	195.7	215.9	235.8	246.2	264.6	282.0	297.7	284.6	266.7	251.8	228.9
1979	206.9	206.7	214.7	210.1	218.2	239.1	260.1	257.3	238.5	218.0	200.4	182.1
1980[1]	177.8	191.0	205.6	217.2	238.1	281.7	295.9	308.0	306.4	302.9	301.6	302.7
1981[1]	304.6	332.1	372.3	394.3								

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*



Wholesale Price of 92 Score Creamery (Grade A, Bulk) Butter at Chicago In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1972	67.8	67.8	67.8	67.7	67.7	67.7	67.8	69.5	70.2	69.4	69.2	70.5	68.6
1973	67.7	67.7	64.2	61.6	61.0	61.0	63.4	78.2	85.9	79.3	75.0	73.0	69.8
1974	68.5	64.1	68.1	68.2	60.5	60.6	60.8	67.1	67.7	68.8	68.9	65.3	65.7
1975	66.8	68.1	68.1	69.2	69.2	69.2	76.6	83.6	87.9	93.0	97.3	103.6	79.4
1976	86.1	80.9	86.0	89.5	89.9	95.0	105.8	106.2	92.4	90.8	90.8	90.8	92.0
1977	90.8	90.8	92.7	100.1	100.7	100.7	100.7	100.7	100.7	100.7	100.9	101.5	98.4
1978	100.7	100.7	101.2	105.2	106.7	106.7	107.9	116.7	115.8	115.6	121.1	118.8	109.8
1979	111.3	111.3	114.1	120.7	121.8	121.8	122.7	128.7	127.8	128.8	130.0	130.2	122.4
1980	130.2	130.3	130.4	134.3	136.9	139.0	139.3	144.5	145.1	147.1	147.6	147.7	139.3
1981	147.2												

Source: Economic Research Service, U.S.D.A.

Average Wholesale Price of 92 Score A Creamery Butter[1] at New York In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1969	68.6	68.7	68.8	70.7	70.8	70.7	70.8	70.8	71.3	71.3	70.9	69.6	68.5
1970	68.6	68.7	68.8	70.7	70.8	70.7	70.8	70.8	71.3	71.3	70.9	71.7	70.4
1971	70.8	70.8	70.7	68.8	68.7	68.8	68.7	68.7	69.2	68.8	68.8	69.0	69.3
1972	68.8	68.8	68.8	68.8	68.8	68.8	68.8	70.4	71.0	70.8	70.3	71.5	69.6
1973	68.7	68.7	—	62.4	62.0	61.9	63.9	—	—	—	77.0	74.4	68.9
1974	70.8	65.3	69.8	69.9	62.1	61.8	62.1	68.9	69.4	70.6	70.5	67.3	67.4
1975	67.7	69.3	69.2	70.4	70.5	70.6	78.8	86.3	90.0	95.0	104.2	109.5	81.8
1976	87.8	82.4	88.1	91.8	92.1	97.4	108.4	108.2	97.5	93.4	92.9	92.9	94.4
1977	92.7	92.9	95.2	103.2	102.9	102.9	103.1	103.7	105.1	105.6	105.0	106.0	101.5
1978	104.7	103.5	105.9	108.4	108.8	109.3	111.7	120.7	122.0	121.9	126.0	125.8	114.1
1979	115.0	115.0	119.5	123.9	124.5	124.6	127.1	134.5	135.8	134.2	135.3	136.6	127.2
1980	134.7	135.7	136.7	139.6	141.3	142.4	143.3	151.5	151.7	152.6	153.6	153.9	144.8
1981	153.4	153.7											

[1] Grade A, bulk. *Source: Department of Agriculture*

Cadmium

The domestic production of cadmium in 1980 continued its downward trend of recent years, dropping 14 percent from the 1979 level to about 1,480 tonnes. Contributing factors were the closure by New Jersey Zinc. Co. of its Palmerton, Pa. zinc smelter at the end of 1980, and the closure of St. Joe Minerals Corporation's Monaca, Pa. plant at the end of 1979. Cadmium is recovered as a byproduct of smelting domestic and imported zinc concentrates. Growing concern over the dispersal of toxin materials has had the dual effect of increasing cadmium recovery at primary smelters and reducing the amount of cadmium dissipated in the environment through industrial operations.

The United States, which is the world's largest consumer of cadmium, is considerably dependent upon imports. Net import reliance (imports minus exports plus adjustments for Government and industry stock changes) for cadmium in 1980 represented 62 percent of apparent consumption. Imports for consumption of cadmium metal in 1980 were about 2,100 tonnes, almost the same as in 1979. Canada, Australia, and Mexico supplied 60 percent of the metal imported in 1980.

Apparent domestic consumption of cadmium in 1980 declined to about 3,900 tonnes from 4,817 tonnes in 1979. The use of cadmium in batteries, plastic stabilizers, and pigments continued to be growing applications, despite the downturn in total consumption. Plated hardware accounted for an estimated 34 percent of total use in 1980; batteries—22 percent; transportation—17 percent; pigments—13 percent; plastics and synthetic products—11 percent; and others—3 percent.

During 1980, producer and consumer stocks of cadmium declined to about 1,000 tonnes. The strategic stockpile goal was revised downward from 11,204 tonnes of cadmium to 5,307 tonnes because of a reduction in anticipated requirements, according to the Federal Emergency Management Agency. The stockpile at the end of 1980 remained at 2.871 tonnes.

The producer price for cadmium remained at $3.25 per pound from mid-January through April 1980, declined to $2.50 to $3.00 during the summer, and to $2.50 from September through the yearend.

World Smelter Production of Cadmium Metal In Metric Tons[5]

Year	Australia[3]	Belgium	Canada[3]	France	W. Germany	Italy	Japan	Mexico[3]	Norway	Poland	Un. King.	U.S.S.R.	United States[4]	Zaire	World Total
1969	1,259	2,092	2,124	1,153	1,746	930	6,095	462	198	925	541	5,100	12,646	661	38,749
1970	1,355	2,407	1,845	1,164	2,282	937	5,403	591	216	990	701	5,200	9,465	699	36,454
1971	1,234	2,088	1,568	1,276	2,162	772	5,898	424	202	880	578	5,300	7,930	578	34,014
1972	1,586	2,536	2,450	1,262	2,014	918	6,678	410	192	780	530	5,400	8,290	652	36,776
1973	1,494	2,528	3,084	1,336	2,692	876	6,988	402	194	780	692	5,500	7,502	612	37,850
1974	1,588	2,300	2,740	1,420	2,952	1,166	6,674	1,162	198	780	618	5,700	6,666	598	38,082
1975	1,210	2,094	2,628	1,004	2,244	902	5,858	1,292	104	780	606	5,800	4,386	582	33,586
1976[5]	649	1,196	1,314	532	1,275	436	2,500	710	80	750	190	2,700	2,047	266	16,773
1977	671	1,434	1,185	790	1,336	449	2,844	908	97	754	295	2,750	1,999	246	17,935
1978	754	1,139	964	694	1,182	383	2,530	897	120	761	291	2,800	1,653	186	16,765
1979[1]	800	1,420	1,480	790	1,170	460	2,590	990	110	766	410	2,850	1,715	240	18,280
1980[2]	960	1,510	1,200				2,240	900					1,480		17,620

[1] Preliminary. [2] Estimate. [3] Refined metal. [4] Primary & secondary metal. [5] Data prior to 1976 are in THOUSANDS OF POUNDS. *Source: Bureau of Mines*

Salient Statistics of Cadmium in the United States In Metric Tons[6] of Contained Cadmium

Year	Net Import Reliance as a % of Apparent Consumption	Production				Imports (for Consumption)			Price[5] $ per lb.	Exports Cadmium Metal, Alloys, Dross,		Consumption[4]	Stocks, Dec. 31		
		Metallic	Primary Producers Shipments	Primary Producers Value Mil. $	Cadmium Sulfide[3]	Metallic	Flue Dust[3]	Total		Flue Dust	Value $ Ths.		Industry Metallic	Industry Compounds	Distributors
1969		12,646	12,978	40.6	2,439	1,078	1,115	2,193		1,085	3,254	15,062	1,432	722	
1970		9,465	6,848	24.2	2,137	2,492	1,111	3,603		373	997	9,062	3,837	944	
1971		7,930	7,774	9.8	2,236	3,498	1,112	4,610	1.92	66	172	10,872	4,297	975	
1972		8,290	10,480	19.0	2,714	2,422	740	3,162	2.56	1,018	2,363	12,626	2,342	982	
1973		7,502	8,608	23.9	2,824	3,896	348	4,244	3.64	306	598	12,534	1,530	1,122	
1974		6,666	6,500	21.4	2,170	3,970	332	4,302	4.09	62	238	12,100	1,396	330	
1975[6]	41	1,990	742	4.2	895	2,375	314	2,689	3.36	180	589	3,055	1,881	121	
1976	64	2,047	2,707	10.5	729	3,094	223	3,317	2.66	229	713	5,381	1,242	148	
1977	51	1,999	1,837	7.1	639	2,332	13	2,345	2.96	107	316	3,818	1,452	72	255
1978	63	1,653	1,957	5.9	698	2,881	—	2,881	2.45	326	864	4,510	1,152	45	296
1979[2]	64	1,715	2,370	9.5	1,494	2,572	—	2,572	2.76	211	550	4,817	506	52	341
1980[1]	62	1,480	1,132			2,800	—	2,800	2.88	155		3,900	722	40	13

[1] Estimate. [2] Preliminary. [3] Cd content. [4] Apparent Primary cadmium in all forms. [5] Producer to consumer in 1 to 5 ton lots, average. [6] Data prior to 1976 are in THOUSANDS OF POUNDS. *Source: Bureau of Mines*

Castor Beans

World castorbean production for 1980/81 was forecast by the Foreign Agricultural Service of the USDA in late 1980 at 911,000 tonnes, slightly below the 1979/80 total of 930,000 tonnes. A severe drought struck Brazil's principal castorbean growing region of Bahia during the summer of 1980, leaving a crop of only 300,000 tonnes. Prior to the onset of the drought, castorbean production had been expected to reach 400,000 to 450,000 tonnes, well above the 1979/80 total of 325,000 tonnes. India was expected to come close to matching the previous season's production of 280,000 tonnes, while a slight increase was expected for castorbean production in Mainland China. Collectively, Brazil, India, and China produce approximately 80 percent of the world's castorbeans.

World castorbean and oil trade slowed considerably in 1980. A combination of slack demand in most industrial countries and a smaller than anticipated Brazilian crop cut world castorbean and oil trade (on an oil equivalent basis) to about 200,000 tonnes in 1980 from 238,000 tonnes in 1979. Shipments of castor oil by Brazil in 1980 were sharply below the 140,000 tonnes exported in 1979 which represented nearly 70 percent of the world's castor oil exports.

The United States, which continues to be the world's largest castor oil market (primarily for industrial products), imported 42,732 tonnes of castor oil in 1980, 12 percent less than in 1979.

The USDA forecast 1981 world castorbean and oil trade (oil-equivalent basis) at 225,000 tonnes, based on the assumption of an increase in demand and a recovery in Brazilian castorbean production.

In late 1980, at a symposium in New Delhi on the expansion of trade among developing countries in vegetable oilseed products, it was suggested by the Indian commerce minister that Brazil and India (the world's largest producers of castor oil) should cooperate in the marketing of this product.

World Production of Castorbeans In Thousands of Metric Tons

Crop Year	Argentina	Brazil	Ecuador	Ethiopia	India	Romania	Iran	Israel	Mexico	Pakistan	Thailand	U.S.S.R.	Rep. of So. Afr.	Sudan	World Total
1969	4	442	27	12	123	12	9	8	7	13	36	68	5	23	915
1970	7	298	23	13	136	10	9	8	7	13	44	70	4	17	774
1971	7	273	25	13	154	10	8	8	7	13	42	53	5	19	744
1972	7	437	22	13	175	10	7	8	7	13	42	89	5	17	943
1973	7	558	26	13	229	10	5	8	3	13	42	76	5	14	1,117
1974	7	573	16	11	210	10	4	8	4	13	32	74	5	15	1,076
1975	7	353	13	10	225	12	4	8	8	14	48	52	5	16	880
1976	7	222	10	10	215	5	4	8	6	8	65	41	5	2	701
1977	7	277	8	11	256	5	4	8	6	19	50	45	5	2	809
1978	7	388	10	11	275	6	4	8	6	19	40	43	5	9	958
1979[1]	6	325	10	10	280	6	4	8	6	19	40	62	5	9	930
1980[2]	6	300	10	10	275	6	3	8	6	20	40	60	5	10	911

[1] Preliminary. [2] Estimate. *Source: Foreign Agricultural Service, U.S.D.A.*

Salient Statistics of Castor Oil in the United States In Millions of Pounds

Year Beginning Oct. 1	Supply			Disappearance								No. 1 Braz. N.Y.[2] ¢ Lb.
					Domestic							
	Imports	Stocks Oct. 1	Total	Exports	Per Capita (in Lbs.)	Total	Paint & Varnish	Fatty Acids	Resins & Plastic	Lubricants & Oils	Other Inedible	
1970–1	85.3	118.9	204.2	—	0.53	110.1	5	13	1	6	85	15.5
1971–2	82.5	94.0	176.5	—	0.66	137.9	30	22	13	6	67	17.2
1972–3	87.6	38.6	126.2	—	0.54	113.9	5	6	11	6	85	23.3
1973–4	123.0	12.3	135.3	—	0.55	117.1	7	3	8	6	93	52.6
1974–5[1]	86.2	18.2	104.5	—	0.41	88.6	—	—	5	6	79	44.0
1975–6[1]	116.2	15.9	132.1	—		92.1						31.5
1976–7[1]	117.7	44.5	162.2	—		106.6						33.3
1977–8[1]	264.3	31.0	295.3			104.7						43.4
1978–9[1]		17.5										41.8

[1] Preliminary [2] Tanks, imported—calendar year. *Source: Economic Research Service, U.S.D.A.*

Monthly Average Wholesale Prices of Castor Oil[1] at New York In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1976	29.00	27.50	27.50	27.50	27.50	31.50	35.00	38.50	39.00	39.00	39.00	39.00	33.33
1977	39.00	39.00	40.00	40.00	45.00	45.00	45.00	45.00	45.00	46.00	46.00	46.00	43.42
1978	46.10	46.50	46.50	46.30	46.20	40.30	39.40	37.90	37.90	37.90	37.90	37.90	41.73
1979	37.90	37.90	37.80	37.80	37.80	38.40	41.30	50.90	53.10	54.10	56.00	56.00	44.92
1980	55.70	55.70	55.80	55.60	55.00	52.00	51.00	49.80	48.00	46.50	45.30	46.00	52.50

[1] Average wholesale, TANK CARS, IMPORTED BRAZIL. *Source: Foreign Agricultural Service, U.S.D.A.*

Cattle and Calves

January 1, 1981 marked the first solid expansion of cattle numbers in the current cattle cycle. The inventory of cattle and calves increased 3 percent from the 111.2 million head recorded on January 1, 1980, to 115 million head on January 1, 1981. These figures reflected producers' response to the record-high cattle prices in the spring of 1979 when most heifer retention and breeding decisions for the 1980 calf crop were made. Furthermore, it reflected the excellent grazing conditions which prevailed in 1979 and through the spring of 1980. The effects of the 1980–1981 drought, which resulted in increased nonfed slaughter and consequently lowered cattle prices, were expected to be seen in the cattle inventory in the second half of 1981 and in 1982. The rate of inventory increase was expected to slow in 1981 because of the previous spring's unfavorable cattle prices and poor grazing conditions that extended into this year.

The January 1 beef cow herd expanded from 37.1 million to 39.0 million head in 1981—a 5 percent increase. Commercial cow slaughter in 1980 was 400,000 head greater than the 5.9 million slaughtered during the very favorable grazing year of 1979. The rate of increase in beef heifer retention for possible herd expansion slowed to 4 percent from the 7 percent recorded a year earlier. Nevertheless, the number of beef replacement heifers on January 1, 1981 still increased by 250 thousand head over the January 1, 1980 level. A larger proportion of replacement heifers entered the cow herd during the first half of 1980 than in any year since records began in 1973.

The 1980 calf crop increased 6 percent (nearly 2.8 million head) over 1979, and 3.5 percent over the 1978 calf crop. Calves born in the first half of the year represented 71.5 percent of the calf crop.

Although nonfed steer and heifer slaughter was the largest since 1977, reduced feedlot placements and the larger 1980 calf crop resulted in a 5 percent increase in the feeder cattle supply outside feedlots on January 1, 1981. Nonfed steer and heifer slaughter in 1980 rose to 2.85 million head, 79 percent over 1979.

Fed cattle slaughter in 1980 declined 6 percent, marking the third consecutive year of decline. Fed cattle kill constituted only 71 percent of total commercial kill and only 89 percent of steer and heifer kill compared with 76 and 94 percent, respectively, in 1979. Cow slaughter increased 400,000 head to 6.3 million head, with slaughter increasing in the second half of the year as forage supplies declined. Calf slaughter declined 235,000 head in 1980.

Average dressed weight set another record in 1980 and together with a slight increase in cattle slaughter resulted in beef production rising above year-earlier levels for the first time since 1976. Beef production increased 1 percent above 1979, yet cattle slaughter increased by only 127,000 head.

Futures Markets

Live beef cattle futures and feeder cattle futures are traded on the Chicago Mercantile Exchange, and a smaller live cattle futures contract is traded on the MidAmerica Commodity Exchange in Chicago. Imported lean beef futures are traded on the New York Mercantile Exchange.

World Cattle and Buffalo Numbers In Millions of Head

Year	Argentina	Australia	Brazil	Canada	China	Colombia	France	W. Germany	India	Turkey	Mexico	South Africa	USSR	Un. Kingdom	United States	World Total
1969	48.3	20.6	92.8	11.5	92.2	19.5	21.6	14.1		15.0	23.6	12.1	95.7	12.1	110.0	1,232
1970	48.4	22.6	78.4	11.8	92.4	20.2	21.7	14.3		14.4	24.9	10.1	95.2	12.3	112.4	1,228
1971	49.8	24.4	81.1	12.2	92.6	20.5	21.7	14.0		13.9	25.1	10.0	99.2	12.4	114.6	1,245
1972	52.3	27.4	85.1	12.3	92.7	21.0	21.7	13.6		13.7	26.4	11.6	102.4	12.9	117.9	1,268
1973	54.8	29.1	86.1	12.6	92.8	22.1	22.6	13.9		14.1	26.8	11.7	104.0	13.8	121.5	1,288
1974	58.0	30.8	88.1	13.2	92.9	23.0	23.9	14.4		14.3	27.5	12.3	106.3	14.8	127.8	1,311
1975	59.6	32.8	94.0	14.0		23.0	24.3	14.4		14.4	28.7	12.3	109.1	14.8	132.0	N.A.
1976	61.5	33.4	92.0	14.0		23.8	23.6	14.5	240.5	14.8	28.9	12.8	111.0	13.9	128.0	963
1977	61.9	31.5	91.0	13.7		24.3	23.3	14.5	241.5	15.2	29.3	13.1	110.3	13.7	122.8	948
1978	61.8	29.3	89.0	12.9		25.2	23.4	14.8	242.7	15.6	29.7	13.0	112.7	13.5	116.4	941
1979	60.0	27.1	90.0	12.3		26.2	23.5	15.0	242.5	16.0	29.3	13.2	114.1	13.5	110.9	935
1980[2]	58.7	26.2	93.0	12.4		27.2	23.6	15.1	241.2	16.2	29.5	12.6	115.1	13.3	111.2	937
1981[1]	58.5	25.9	96.0	12.8		28.4	23.8	15.2	241.0	16.5	29.5	12.5	115.5	13.3	115.0	946

[1] Estimate. [2] Preliminary. *Source: Foreign Agricultural Service, U.S.D.A.*

Commercial Slaughter of Cattle and Calves in the United States[2] In Thousands of Head

Year	Cattle		Calves		Total[2] Cattle and Calves	Year	Cattle		Calves		Total[2] Cattle and Calves
	Federally Inspected	Total[2]	Federally Inspected	Total[2]			Federally Inspected	Total[2]	Federally Inspected	Total[2]	
1970	30,793	35,025	3,024	4,072	39,097	1976	38,992	42,654	4,438	5,350	48,004
1971	31,419	35,585	2,806	3,689	39,274	1977	38,717	41,856	4,696	5,517	47,373
1972	32,267	35,779	2,421	3,053	38,832	1978[1]	36,948	39,552	3,620	4,170	43,722
1973	30,521	33,687	1,808	2,249	35,936	1979[1]	31,844	33,650	2,498	2,824	36,474
1974	33,319	36,812	2,355	2,987	39,799	1980[1]	31,641	34,130	2,295	2,700	36,830
1975	36,904	40,911	3,894	5,209	46,120	1981					

[1] Preliminary. [2] Includes other wholesale and retail slaughter. *Source: Crop Reporting Board, U.S.D.A.*

Cattle Supply and Distribution in the United States In Thousands of Head

					Livestock Slaughter—Cattle and Calves							
					Commercial							
Year	Cattle & Calves on Farms Jan. 1	Imports	Calves Born	Total Supply	Federally Inspected	Other[2]	All Commercial	Farm	Total Slaughter	Deaths on Farms	Exports	Total Disappearance
1972	117,862	1,186	47,682	166,730	34,688	4,144	38,832	434	39,335	5,126	104	44,565
1973	121,539	1.039	49,194	171,772	32,329	3,607	35,936	477	36,506	6,487	273	43,266
1974	127,778	568	50,873	179,229	35,674	4,125	39,799	722	40.528	6,110	204	46,842
1975	132,028	389	50,183	182,600	40,798	5,322	46,120	750	46,870	6,992	196	54,058
1976	127,980	984	47,384	176,348	43,430	4,574	48,004	722	48,726	5,190	205	54,121
1977	122,810	1,133	45,931	169,974	43,413	3,960	47,373	700	48,073	6,000	107	54,180
1978	116,375	1,253	43,818	161,446	40,568	3,154	43,722	550	44,272	5,680	122	50,074
1979	110,864	732	42,603	154,199	34,342	2,473	36,474	430	36,932	5,600	66	42,594
1980[1]	111,192	681	45,354	157,227	33,936	2,494	36,430	400	36,830	5,400	66	42,296
1981[1]	115,013											

[1] Preliminary. [2] Wholesale and retail. *Source: Economic Research Service, U.S.D.A.*

Number of Cattle & Calves on U.S. Farms & Ranches on Jan. 1, by Classes In Thousands of Head

		Cows & Heifers That Have Calved			Heifers 500 lbs. & Over						
Year	Total Cattle & Calves	Beef Cows	Milk Cows	Total	For Beef Cow Replacement	For Milk Cow Replacement	Other Heifers	Total	Steers 500 lbs. & Over	Bulls 500 lbs. & Over	Heifers, Steers & Bulls Under 500 lbs.
1972	117,862	38,807	11,778	50,585	6,987	3,828	6,399	17,214	15,999	2,376	31,688
1973	121,539	40,918	11,624	52,541	7,436	3,874	6,434	17,743	16,555	2,466	32,229
1974	127,788	43,008	11,286	54,293	8,226	3,942	6,821	18,988	17,802	2,645	33,942
1975	132,028	45,472	11,211	56,682	8,879	4,095	6,509	19,482	16,373	2,987	36,302
1976	127,980	43,888	11,087	54,974	7,196	3,958	7,393	18,546	17,083	2,845	34,531
1977	122,810	41,389	11,035	52,424	6,529	3,888	8,057	18,473	16,885	2,665	32,363
1978	116,375	38,809	10,939	49,748	5,845	3,896	7,970	17,710	16,779	2,544	29,595
1979	110,864	37,062	10,790	47,843	5,527	3,932	7,445	16,903	16,442	2,403	27,263
1980[1]	111,192	37,086	10,779	47,865	5,939	4,158	7,130	17,226	16,019	2,492	27,590
1981[1]	115,013	38,987	10,869	49,856	6,189	4,353	7,333	17,874	15,605	2,556	29,123

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

Condition[1] of Pasture and Range Feed in the United States, on First of Month In Percent of Normal

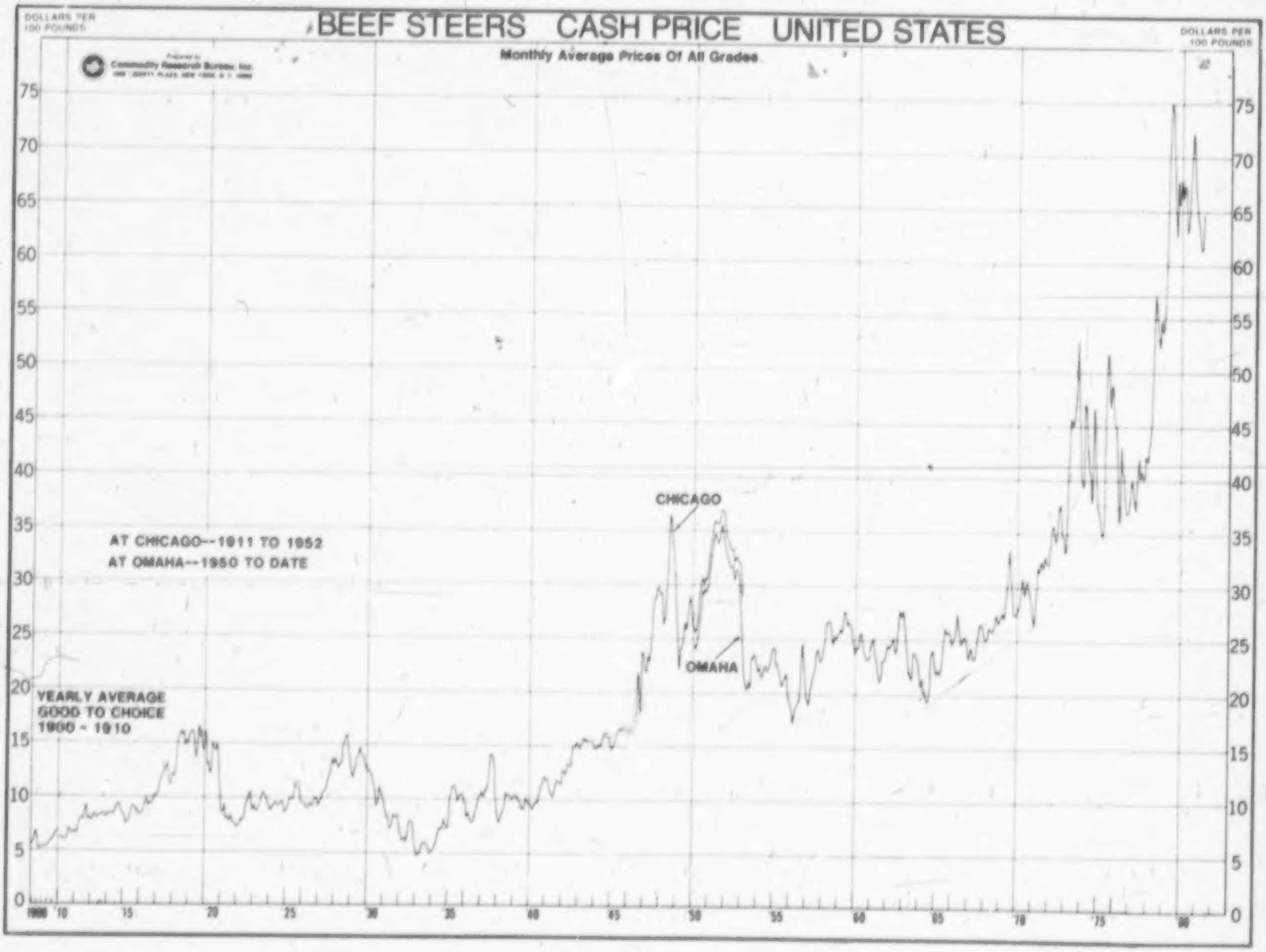
Year	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1972	80	78	84	82	81	81	80	81	80
1973	86	87	87	84	82	80	82	83	81
1974	79	81	84	82	66	71	75	70	71
1975	77	76	86	88	80	76	80	77	74
1976	73	79	77	75	70	61	63	66	64
1977	68	76	74	68	64	71	76	75	72
1978	68	75	85	85	77	75	77	73	70
1979	75	84	87	86	84	86	81	77	75
1980	76	80	81	78	60	61	63	65	63
1981	70								

[1] Indicates current supply of feed for grazing on non-irrigated pastures & ranges relative to that expected from existing stands under very favorable weather conditions. [80 & over, good to excellent; 65–79, poor to fair; 50–64, very poor; 35–49, severe drought; under 35, extreme drought.] *Source: Statistical Reporting Service, U.S.D.A.*

Cattle & Calves on U.S. Farms on January 1, by Leading States In Thousands of Head

Jan.1	Calif.	Colo.	Ill.	Iowa	Kans.	Minn.	Miss.	Mo.	Mont.	Nebr.	Ohio	Okla.	So. Dak.	Texas	Wis.
1971	4,680	3,414	3,300	7,403	6,497	3,998	2,254	4,989	3,165	6,457	2,072	5,085	4,322	13,200	4,158
1972	4,662	3,610	3,400	7,773	6,757	3,998	2,322	5,238	3,165	6,780	2,113	5,441	4,408	13,464	4,241
1973	4,710	3,756	3,240	7,770	6,800	4,038	2,415	5,550	3,197	6,865	2,134	5,660	4,496	15,100	4,283
1974	5,250	3,744	3,250	7,660	6,990	4,240	2,610	6,330	3,380	7,410	2,150	6,020	5,000	16,250	4,400
1975	5,200	3,375	3,200	7,350	6,400	4,430	3,000	6,800	3,340	6,900	2,350	6,500	4,950	16,600	4,640
1976	5,000	3,250	3,400	7,500	6,450	4,430	2,723	6,600	3,150	6,550	2,305	6,400	4,500	15,600	4,550
1977	4,750	3,030	3,200	7,650	6,400	4,000	2,670	6,400	2,980	6,450	2,205	5,650	3,650	15,800	4,275
1978	4,430	3,180	2,950	7,800	6,000	3,700	2,130	6,000	2,680	6,500	2,025	5,900	3,925	14,500	4,100
1979	4,700	3,090	2,850	7,300	6,200	3,650	1,790	5,550	2,607	6,450	1,850	5,300	3,750	13,900	4,100
1980	4,550	2,975	2,700	7,150	6,200	3,750	1,810	5,400	2,645	6,400	1,825	5,500	4,010	13,200	4,280
1981[1]	4,760	3,125	2,650	7,450	6,450	3,800	1,800	5,550	2,675	6,950	1,815	5,400	4,190	13,700	4,550

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*



Number of Cattle and Calves on Feed[2] on Jan. 1 in the United States In Thousands of Head

Jan. 1	Arizona	California	Colorado	Illinois	Indiana	Iowa	Kansas	Minnesota	Missouri	Nebraska	Ohio	South Dakota	Texas	Wisconsin	Total U.S.
1968	385	902	628	721	336	1,924	610	585	426	1,354	341	406	810	143	11,417
1969	442	968	711	786	349	2,213	766	556	442	1,430	324	361	1,075	154	12,534
1970	510	1,031	795	755	349	2,213	892	589	402	1,477	318	361	1,417	146	13,190
1971	524	1,001	888	649	314	1,992	916	548	342	1,422	308	339	1,480	150	12,770
1972	539	1,045	983	662	327	2,112	1,100	537	373	1,550	320	363	1,781	144	13,912
1973	655	1,181	1,050	585	276	1,922	1,250	494	310	1,581	300	378	2,245	143	14,432
1974	609	1,209	930	530	263	1,715	1,160	464	250	1,525	280	381	2,205	136	13,642
1975	319	688	755	500	250	1,200	920	380	200	1,160	290	345	1,327	135	10,167
1976	510	960	925	630	285	1,530	1,340	430	260	1,390	320	365	1,882	168	12,943
1977	361	812	915	620	290	1,520	1,315	340	255	1,580	325	370	1,710	130	11,948
1978	422	845	1,020	650	315	1,690	1,400	400	220	1,700	295	365	1,850	130	12,811
1979	490	796	1,080	510	280	1,620	1,440	400	180	1,800	225	340	2,000	106	12,681
1980	420	764	960	460	250	1,390	1,270	390	120	1,680	180	350	1,970	112	11,713
1981[1]	401	677	845	510	280	1,370	1,100	370	105	1,640	160	355	1,830	115	11,105
1982															

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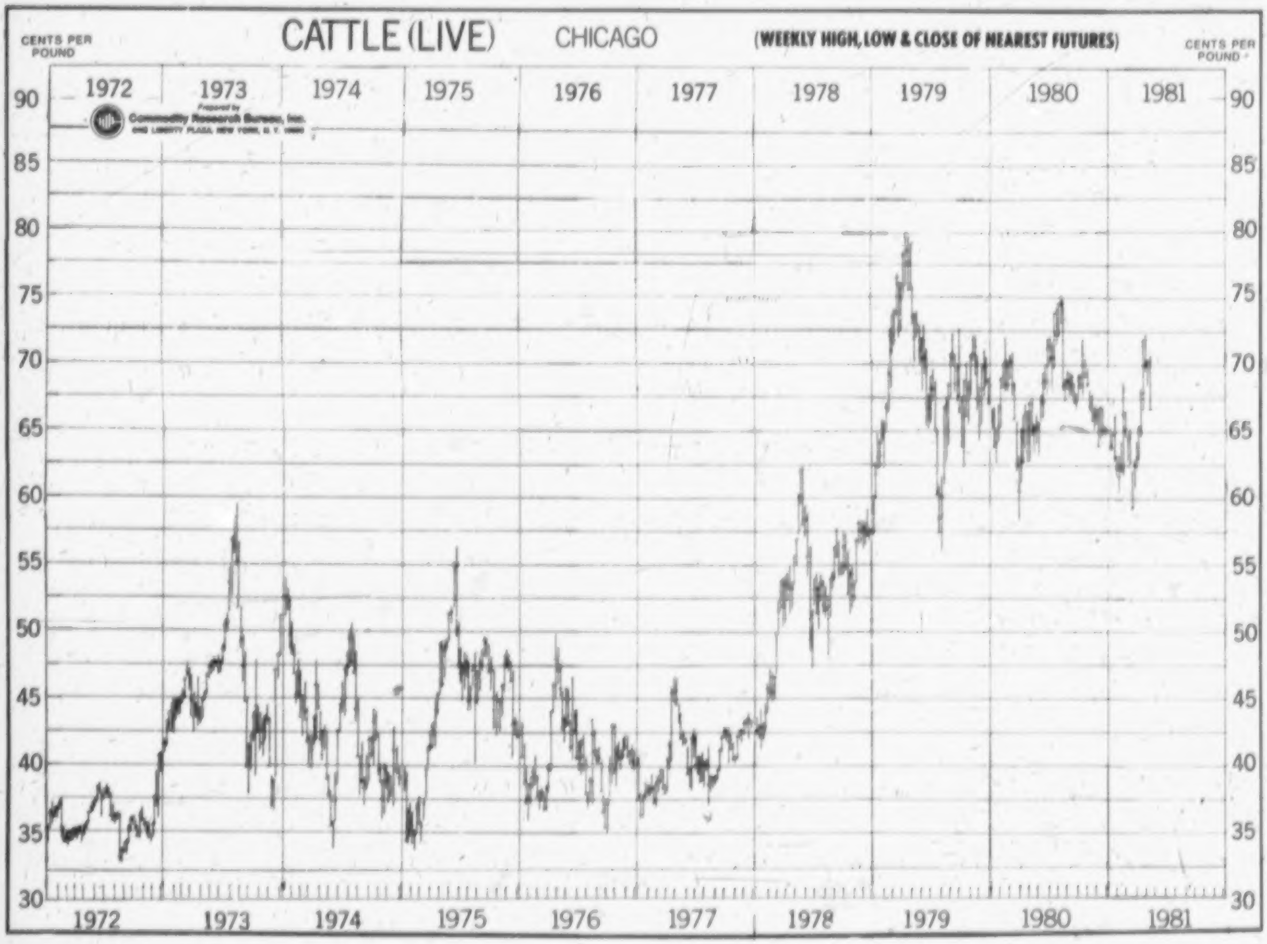
[1] Preliminary. [2] Cattle & calves being fattened for slaughter market on grain or other concentrates & are expected to produce a carcass that will grade good or better. *Source: Crop Reporting Board, U.S.D.A.*



Farm Value, Income & Wholesale Prices of Cattle & Calves

	United States			At Omaha									Canada (At Winnipeg)[4]		
	Farm Value of All Cattle—Jan. 1		Gross Income From C. & C.[2]	Steers[3]			Heifers		Choice Feeder Steers at K.C.	Cows, Utility Omaha	Vealers, Choice-So. St. Paul	Cows, Commercial Omaha	Over 1,050 Lbs. Choice	Up to 1,050 Lbs. Good	Stockers & Feeders Good
Year	Per Head $	Total Million $	$	Prime	Choice	Good	Choice	Good							
				Dollars Per 100 Pounds											
1968	148.0	16,241	11,447	27.73	26.87	24.79	26.89	25.96		17.94	33.75	17.65	25.66	25.04	24.92
1969	158	17,390	12,781	30.62	29.45	27.14	29.56	28.53		20.29	38.90	19.99	27.86	27.02	29.71
1970	179	20,160	13,935	30.22	29.36	27.04	29.42	28.51		21.32	44.82	20.94	29.75	28.80	31.61
1971	184	21,113	15,247	33.38	32.39	29.38	32.54	31.46		21.62	46.30	21.21	32.68	31.86	37.12
1972	208	24,520	18,579	36.67	35.78	33.43	35.60	34.72		25.21	55.09	24.86	36.19	35.43	42.20
1973	252	30,584	22,814	45.61	44.54	42.01	44.25	43.11	53.17	32.82	64.08	32.90	44.56	43.29	47.38
1974	293	37,477	18,350	43.13	41.89	38.71	42.11	40.97	37.88	25.56	49.63	25.45	49.62	47.88	42.86
1975	159	21,000	17,982	41.39	44.61	39.45		43.12	33.91	21.09	40.44	21.63	41.96	40.43	33.26
1976	190	24,335	19,803		39.11	35.87		37.98	39.40	25.31	45.18	26.08			
1977	206	25,252	20,704		40.38	36.70		38.96	40.18	25.32	48.19	26.11			
1978	232	27,055	28,748		52.34	47.98		53.30	58.78	36.79	69.24	37.80			
1979[1]	403	44,698	35,505		67.66	63.05		65.91	97.66	50.10	91.41	50.06			
1980[1]	502	55,831			66.96				84.64	45.73	75.53				
1981[1]	473	54,360													

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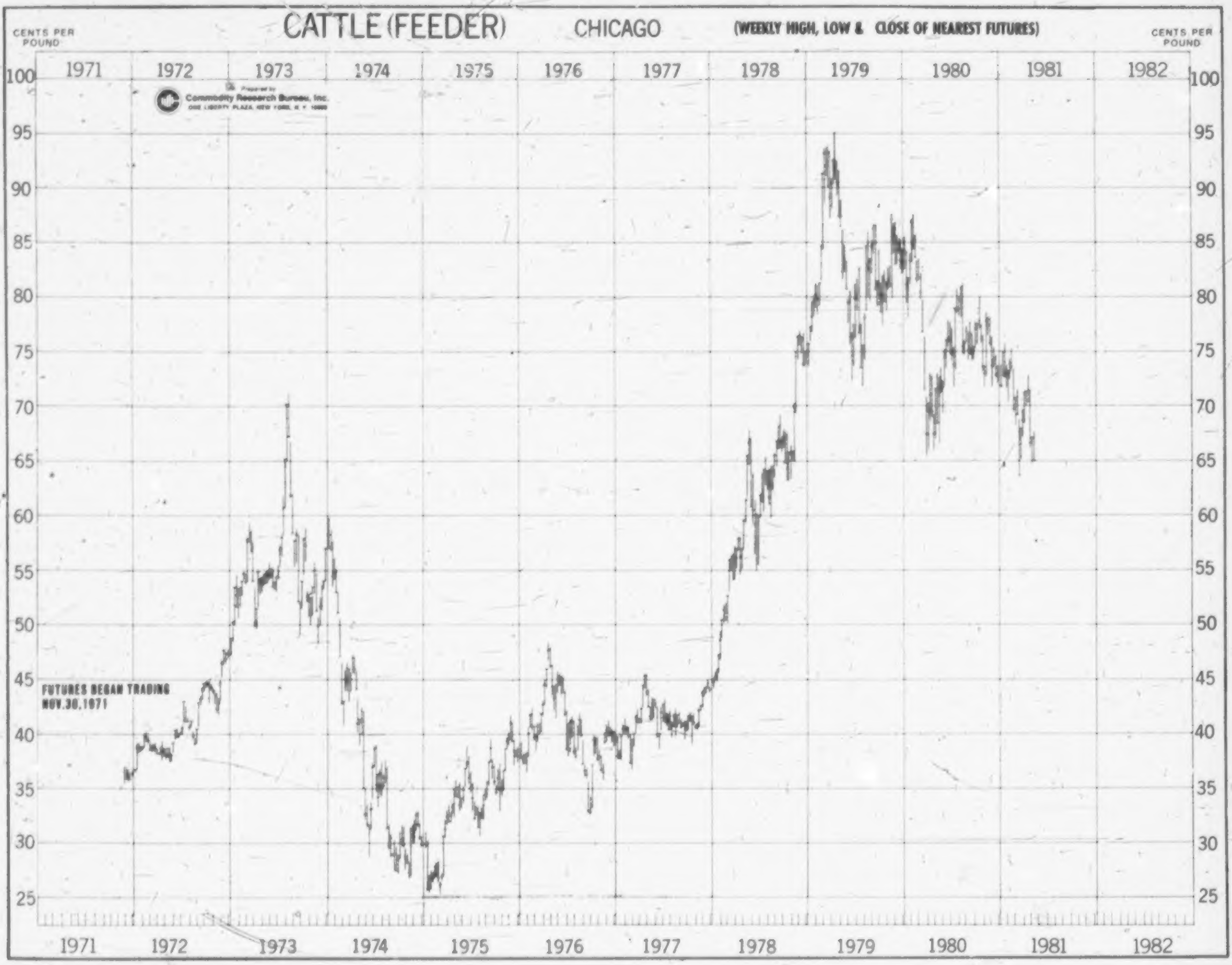
[1] Preliminary. [2] Excludes interfarm sales & Gov't. payments. Cash receipts from farm marketings plus value of farm home consumption. [3] Weighted average prices of beef steers, sold out of first hands for slaughter. [4] Prices converted to U.S. $ at current rate of exchange. *Source: Economic Research Service, U.S.D.A.*

CATTLE AND CALVES



Average Prices of Steers (Stocker & Feeder) Kansas City In Dollars Per 100 Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1973	44.24	48.06	50.90	50.67	50.79	49.38	53.23	56.40	49.73	49.84	47.63	44.42	49.13
1974	48.70	45.30	43.65	42.49	37.24	33.16	34.44	33.26	29.80	29.80	27.97	28.05	36.49
1975	26.79	26.80	27.86	30.73	34.87	35.30	32.53	32.93	35.98	36.74	36.77	36.87	33.42
1976	36.66	36.95	38.82	43.49	42.38	40.24	37.58	37.55	34.03	36.07	35.07	35.19	37.65
1977	34.87	36.54	38.29	41.33	39.88	38.22	38.90	39.61	39.04	40.18	38.79	39.71	38.74
1978	42.85	46.89	51.39	53.81	59.85	57.42	58.67	58.22	60.23	62.06	60.75	64.19	56.16
1979	69.95	75.61	82.55	86.83	82.20	75.00	72.07	72.37	77.81	76.34	78.92	77.55	77.60
1980	76.52	78.35	72.67	66.89	65.52	68.83	69.48	71.92	71.53	71.64	70.23	70.04	71.14
1981	68.56	68.41											

Source: Economic Research Service, U.S.D.A.

High, Low & Closing Prices of June Live Beef Cattle Futures at Chicago In Cents per Pound

Year of Delivery		Year Prior to Delivery									Delivery Year						Life of Delivery Range
		Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	
1978	High	47.20	46.40	44.55	42.60	40.35	39.65	40.20	41.85	43.30	45.17	47.62	53.10	53.75	62.35	60.95	62.35
	Low	45.85	43.65	41.40	40.20	37.40	38.55	38.82	39.40	41.10	42.20	44.65	46.25	49.10	53.45	54.15	37.40
	Close	46.12	44.35	42.55	40.40	38.80	39.55	39.60	41.35	43.02	45.17	46.32	50.47	53.27	60.97	56.15	—
1979	High	53.65	60.27	58.75	59.57	57.85	60.60	61.90	62.25	64.50	67.90	70.50	74.22	79.75	79.12	72.97	79.75
	Low	49.90	53.65	51.10	54.40	53.45	57.05	57.25	58.25	61.20	63.00	64.65	69.52	70.75	70.10	68.05	48.60
	Close	53.60	58.35	55.70	57.60	57.07	59.62	60.25	61.30	63.55	67.67	70.20	71.35	78.35	71.97	68.15	—
1980	High	75.00	74.50	73.60	74.40	72.85	74.30	76.10	76.95	75.80	76.00	75.10	73.77	67.20	67.50	69.50	76.95
	Low	69.20	70.55	68.10	65.45	64.05	70.40	69.12	72.05	72.02	67.70	71.35	63.22	60.25	62.80	63.35	60.25
	Close	73.75	70.90	71.40	66.30	72.62	73.75	72.57	74.92	75.05	71.80	71.95	63.60	64.82	65.30	69.02	—
1981	High	—	—	—	75.25	74.92	76.00	76.60	76.50	76.35	72.65	71.42	68.55	72.40			
	Low	—	—	—	70.80	71.80	72.85	72.90	73.67	69.40	68.05	66.65	63.17	70.10			
	Close	—	—	—	73.95	74.87	73.55	74.37	76.07	71.32	68.72	67.77	68.55	70.17			
1982	High	72.30															
	Low	70.40															
	Close	70.40															

Source: Chicago Mercantile Exchange

Volume of Trading of Live Beef Cattle Futures at Chicago In Thousands of Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	23.80	314.4	468.6	458.6	580.4	597.4	459.2	498.6	500.3	602.3	433.9	440.6	5,040.0
1979	534.2	526.1	660.3	697.4	720.1	586.5	554.2	683.4	553.5	674.3	554.4	470.5	7,214.8
1980	646.0	545.5	562.0	568.6	499.5	460.7	604.3	443.8	461.1	461.0	348.3	395.2	5,997.0
1981	354.8	347.8	430.7	416.4									
1982													

Source: Chicago Mercantile Exchange

Month End Open Interest of Live Beef Cattle Futures at Chicago In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	59,234	72,397	84,902	84,016	95,783	74,827	79,734	86,634	91,351	91,719	91,163	88,797
1979	97,005	96,410	84,814	75,913	65,881	60,296	57,506	59,621	75,371	55,978	64,729	62,872
1980	57,192	60,701	50,406	55,582	53,319	59,162	67,059	57,314	58,815	58,009	64,570	45,864
1981	45,325	45,425	48,336	54,045								
1982												

Source: Chicago Mercantile Exchange

Average Wholesale Prices of Beef Steers at Omaha, Choice (900–1100 Lbs.) In Dollars Per 100 Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1973	40.65	43.54	45.65	45.03	45.74	46.76	47.66	52.94	45.12	41.92	40.14	39.36	44.54
1974	47.14	46.38	42.85	41.53	40.52	37.98	43.72	46.62	41.38	39.64	37.72	37.20	41.89
1975	36.34	34.74	36.08	42.80	49.48	51.82	50.21	46.80	48.91	47.90	45.23	45.01	44.61
1976	41.18	38.80	36.14	43.12	40.62	40.52	37.92	37.02	36.97	37.88	39.15	39.96	39.11
1977	38.38	37.98	37.28	40.08	41.98	40.24	40.94	40.11	40.35	42.29	41.83	43.13	40.38
1978	43.62	45.02	48.66	52.52	57.28	55.38	54.59	52.40	54.26	54.93	53.82	55.54	52.34
1979	60.35	64.88	71.04	75.00	73.99	68.53	67.06	62.74	67.84	65.81	67.00	67.78	67.66
1980	66.32	67.44	66.88	63.07	64.58	66.29	70.47	72.31	69.68	67.18	65.05	64.29	66.96
1981	63.08	61.50											

Source: Economic Research Service, U.S.D.A.

CATTLE AND CALVES

Federally Inspected Slaughter of Cattle in the United States In Thousands of Head

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1972	2,556	2,457	2,707	2,471	2,807	2,833	2,494	2,926	2,789	2,909	2,705	2,615	32,267
1973	2,810	2,424	2,620	2,169	2,694	2,563	2,441	2,366	2,362	2,866	2,687	2,519	30,521
1974	2,794	2,303	2,621	2,643	2,793	2,621	2,821	2,876	2,787	3,230	2,929	2,902	33,319
1975	3,152	2,778	2,826	2,889	2,851	2,898	3,085	3,141	3,319	3,584	3,116	3,267	36,904
1976	3,403	3,032	3,492	3,053	2,980	3,294	3,220	3,388	3,435	3,336	3,154	3,205	38,992
1977	3,272	3,041	3,330	3,033	3,054	3,374	3,085	3,489	3,320	3,282	3,244	3,200	38,717
1978	3,238	3,046	3,243	2,969	3,215	3,052	2,869	3,247	3,027	3,180	3,029	2,834	36,948
1979	3,090	2,559	2,670	2,366	2,622	2,554	2,492	2,860	2,390	2,837	2,593	2,470	31,844
1980	2,739	2,486	2,403	2,539	2,616	2,533	2,667	2,684	2,739	3,003	2,507	2,725	31,641
1981	2,803	2,843	2,726										

Source: Crop Reporting Board, U.S.D.A.

Federally Inspected Slaughter of Calves & Vealers in the U.S. In Thousands of Head

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1971	247	237	299	248	203	207	205	220	239	231	233	238	2,807
1972	226	217	255	185	179	166	164	208	197	211	209	202	2,421
1973	209	169	188	139	131	117	118	115	128	168	170	156	1,808
1974	181	154	180	172	167	137	164	202	212	279	251	254	2,355
1975	284	250	276	284	270	276	344	345	385	443	357	381	3,894
1976	369	327	415	353	304	339	346	373	409	394	388	420	4,438
1977	408	380	457	389	353	368	352	411	403	392	398	387	4,696
1978	368	336	386	304	288	271	261	304	275	287	274	267	3,620
1979	265	212	245	200	188	162	190	216	193	225	210	192	2,498
1980	212	187	201	185	161	154	186	182	198	229	185	214	2,295
1981	215	190	213										

Source: Crop Reporting Board, U.S.D.A.

Average Price Received by Farmers for Beef Cattle In Dollars Per 100 Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average[1]
1971	26.10	28.90	28.80	29.10	29.50	28.90	28.50	29.30	29.20	29.30	29.90	30.30	29.00
1972	31.80	32.90	32.50	32.20	33.30	34.50	34.60	33.60	34.00	34.40	33.00	34.80	33.50
1973	37.90	40.70	43.80	42.80	43.60	43.90	44.60	51.70	46.70	42.70	39.60	37.70	43.00
1974	44.20	43.60	40.70	39.20	37.30	32.60	35.30	37.00	32.60	30.60	28.20	27.70	35.60
1975	27.40	26.80	27.80	31.60	35.30	36.80	35.20	32.30	34.00	33.40	32.30	33.50	32.30
1976	32.80	33.90	33.40	38.00	37.10	36.40	33.60	33.00	32.30	32.20	31.20	32.40	33.70
1977	32.20	33.20	33.80	35.30	36.30	34.00	34.90	34.50	34.70	35.10	34.30	35.50	34.40
1978	37.70	40.50	44.00	47.20	50.50	51.10	50.10	49.30	52.20	53.20	51.90	54.60	48.50
1979	60.20	64.70	70.60	73.40	71.90	66.80	65.50	62.20	66.80	64.60	63.90	64.40	66.00
1980[2]	63.90	66.60	64.30	60.20	60.60	61.30	63.20	64.60	63.60	61.80	59.80	59.70	62.47
1981[2]	59.30	58.70	57.60	59.80									

[1] Weighted average by quantities sold. [2] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

Average Price Received by Farmers for Calves In Dollars Per 100 Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average[1]
1971	33.50	35.70	35.50	35.40	36.00	35.60	35.10	36.40	36.30	36.90	37.80	38.40	36.10
1972	39.70	41.20	41.80	41.50	42.90	44.00	45.10	45.00	45.60	47.10	46.80	46.60	43.90
1973	49.40	53.00	58.50	56.60	58.90	58.50	59.20	68.20	61.20	57.70	52.80	50.10	57.00
1974	54.10	53.30	49.60	47.40	42.70	37.40	36.00	34.30	30.10	27.70	25.70	25.00	35.20
1975	23.90	24.50	24.80	26.90	29.10	29.10	27.70	25.40	26.90	26.60	28.30	30.00	27.20
1976	30.80	33.80	34.80	38.20	38.80	37.70	34.90	34.20	32.90	33.00	32.10	32.80	34.20
1977	33.40	35.70	36.60	38.20	38.40	35.80	36.40	37.10	38.00	37.20	36.80	37.50	36.90
1978	41.00	44.90	50.00	53.70	59.50	58.70	60.10	61.90	65.70	66.40	67.20	72.10	59.10
1979	79.10	87.00	94.80	98.20	99.50	92.30	91.20	87.20	90.00	86.90	86.30	84.30	88.80
1980[2]	85.60	90.80	83.20	75.50	74.50	75.90	75.00	76.30	74.80	74.80	72.60	70.60	77.40
1981[2]	69.20	70.50	69.80	71.40									

[1] Weighted average by quantities sold. [2] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

Cement

U.S. production of cement in 1980 totaled 77 million tons; comprised of 74 million tons of portland cement, 3 million tons of masonry cement, and a minor amount of calcium aluminate cement, according to preliminary U.S. Bureau of Mines data. Total shipments of portland cement by producers in 1980 totaled 75.7 million tons, down 11 percent from the 1979 total and 15 percent below the 1973 record. Masonry cement shipments of 3.1 million tons in 1980 were 19 percent lower than in the previous year.

Hydraulic cement and clinker imported for U.S. consumption in 1980 amounted to 5.3 million tons, 44 percent below the 1979 record of 9.4 million tons. The principal import source was Canada.

Total U.S. demand for cement in 1980 of approximately 78 million tons was about 10 percent below the 1979 level, primarily because of reduced industrial and commercial construction. As a chief binding agent in concrete and mortars, 67 percent was used for ready-mixed concrete; 14 percent for concrete products, such as block, pipe, and prestressed precast concrete; 8 percent by building material dealers; 5 percent by highway contractors; and 6 percent by other contractors, and by government agencies, and for miscellaneous uses.

Energy conservation was a major issue in 1980 for cement producers, with conversions to coal and coke from oil and gas as primary fuel being the dominant recourse. Coal-burning facilities of cement plants increased from 41 percent of industry capacity in 1972 to about 76 percent in 1980, and are expected to exceed 90 percent of capacity by 1990. In addition, to increase efficiency of energy use, new plants and modernization programs are incorporating preheaters, some with flash calciners and dry-process kilns, which will realize substantial fuel economies.

Competitive construction materials include aluminum, steel, fiberglass, wood, stone, and clay products. However, concrete is expected to continue as a mainstay of construction.

World Production of Hydraulic Cement by Selected Countries In Millions of Short Tons[4]

Year	Belgium	Brazil	Canada	China	France	W. Germany	India	Italy	Japan	Poland	Spain	Rep. of So. Afr.	Un. Kingdom	United States	U.S.S.R.	World Total
1968	33.4	42.7	43.4	52.7	150.0	195.9	70.0	173.1	281.3	68.0	88.5	25.8	104.7	512.0	512.8	3,010
1969	36.8	45.9	43.9	58.6	161.5	205.7	77.7	183.8	301.3	69.4	95.7	29.9	102.2	416.9	526.5	3,185
1970[3]	7.4	9.9	7.9	11.0	32.0	42.2	14.9	36.5	63.0	13.4	18.4	6.3	18.8	74.6	105.0	629.6
1971	7.6	10.8	9.1	25.3	31.9	45.2	16.4	35.1	65.5	14.4	18.9	6.5	19.5	80.3	110.6	679.9
1972	7.8	12.5	10.0	25.4	33.0	47.6	17.4	36.9	73.1	15.4	21.6	6.7	19.9	84.6	115.0	723.8
1973	7.8	14.8	11.1	27.6	33.9	45.2	16.5	40.0	86.1	17.1	24.7	7.6	22.0	87.6	120.7	773.8
1974	8.4	16.4	11.4	27.6	35.6	39.7	15.7	40.0	80.6	18.5	24.5	8.0	19.6	82.9	126.9	775.2
1975	7.6	19.2	11.0	33.1	32.6	36.9	17.9	37.7	72.2	20.4	26.6	7.9	18.6	69.7	134.5	774.0
1976	8.3	21.1	10.6	44.1	32.4	37.6	20.5	40.0	75.7	21.8	27.8	7.8	17.4	74.5	137.0	822.4
1977	8.6	21.1	10.6	59.3	31.8	35.5	21.0	41.6	80.6	23.5	30.9	7.2	17.0	80.1	140.1	872.9
1978	8.4	24.4	11.6	71.9	30.9	37.4	21.6	41.6	93.6	23.9	33.3	7.5	17.5	85.5	139.9	938.1
1979[1]	8.7	26.8	13.0	81.5	31.8	39.1	20.1	44.3	96.8	21.1	30.8	7.6	17.8	85.9	135.6	940.0
1980[2]				70.0	30.0	35.0		40.0	90.0		30.0		15.0	78.0	140.0	900.0
1981																

[1] Preliminary. [2] Estimate. [3] Data Prior to 1970 are in MILLIONS OF BARRELS (376-pound Barrels).
Source: Bureau of Mines

Salient Statistics of Cement in the United States

Year	Net Import Reliance as a % of Apparent Consumption	Production — Portland (Million Tons)	Production — Others[2] (Million Tons)	Production — Total (Million Tons)	Capacity Used[3] %	Shipments From Mills — Total Mil. Tons	Shipments From Mills — Value[4] $ Mil.	Average Value (F.O.B. Mill) $ per Ton	Stocks at Mills Dec. 31 (Million Tons)	Imports[5] (Million Tons)	Exports[5] (Million Tons)	Apparent Consumption (Million Tons)	Raw Materials Used in Producing Portland Cement — Cement Rock (Mil. Short Tons)	Limestone[6] (Mil. Short Tons)	Clay & Shale (Mil. Short Tons)	Total (All) (Mil. Short Tons)
1969				76.7	78.7	78.6	1,354	17.22	7.1	1.7	.1	80.3	23.3	84.2	12.2	128.1
1970		73.2	2.9	74.3	88.4	74.6	1,336	17.91	7.6	2.5	.1	75.9	22.8	83.2	11.8	127.2
1971		77.0	3.3	78.3	87.7	80.4	1,528	19.01	6.4	3.1	.1	81.5	23.1	85.9	11.8	130.3
1972		80.7	3.8	82.6	90.6	83.3	1,724	20.69	7.0	4.9	.1	85.0	25.9	84.9	12.2	136.9
1973		83.6	1.9	85.5	83.2	88.7	1,975	22.28	5.5	6.6	.3	90.7	26.1	85.7	12.0	138.2
1974		79.5	1.4	80.9	74.8	81.0	2,151	26.54	7.5	5.7	.2	82.9	23.4	87.7	11.8	137.2
1975	4	66.8	1.3	68.1	62.9	69.1	2,159	31.25	6.9	3.6	.4	70.1	17.9	76.4	10.1	114.9
1976	5	71.2	1.8	73.0	68.4	73.7	2,510	34.07	7.2	3.1	.3	74.1	20.2	81.3	10.7	122.6
1977	6	76.3	2.3	78.6	81.6	80.2	2,932	36.54	6.0	4.0	.2	81.5	25.1	81.5	10.8	128.0
1978	7	81.4	2.6	84.0	77.5	86.6	3,544	40.94	5.3	6.6	.1	87.6	34.4	78.5	11.2	135.6
1979[1]	11	82.1	2.4	84.5	77.1	85.7	3,992	46.55	6.6	9.4	.1	87.8	31.0	83.2	11.3	136.5
1980[7]	7			75.0		77.0	3,927	51.00	6.5	5.7	.2	78.0				

[1] Preliminary. [2] Masonry, natural & pozzolan (slag-line). [3] At Portland-cement mills. [4] Value received f.o.b. mill, excluding cost of containers. [5] Hydraulic cement. [6] Including oyster shells. [7] Estimate. *Source: Bureau of Mines*

CEMENT

U.S. Portland Cement Output Index (Unadjusted) (1947–49=100)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1968	101.5	122.1	156.7	206.0	223.7	221.1	250.0	263.9	238.5	272.7	185.2	136.2	198.1
1969	114.2	120.2	156.2	207.3	236.0	245.4	253.4	257.2	259.9	260.7	184.2	155.4	204.2
1970	101.7	120.8	153.9	196.9	217.6	239.0	253.4	249.1	228.2	234.1	178.6	158.2	194.3
1971	104.1	116.9	170.3	217.5	227.0	265.2	253.7	270.0	255.3	255.7	215.1	156.8	209.0
1972	134.0	138.2	192.8	205.1	252.6	269.6	253.0	304.5	264.2	275.4	198.6	144.2	219.4
1973	143.3	148.5	201.0	217.1	277.9	282.7	285.0	319.3	259.4	301.0	230.6	158.5	235.4
1974	132.6	147.3	189.4	229.7	257.4	258.4	256.0	270.5	248.3	271.9	183.8	138.7	215.3
1975	114.8	105.0	131.4	172.1	204.0	213.8	232.3	234.3	232.7	248.8	169.5	136.3	182.9
1976	106.2	122.7	168.0	198.2	205.5	238.7	230.9	251.1	233.6	223.7	190.4	138.6	192.3
1977	83.5	125.0	187.5	213.6	238.3	269.5	243.9	272.3	250.9	258.5	205.1	156.3	208.7
1978	91.7	110.8	188.1	226.5	268.6	297.8	261.6	301.2	266.4	289.9	226.4	173.2	225.2
1979	99.5	111.5	193.9	214.4	267.0	287.9	270.9	301.4	257.8	296.4	227.1	174.7	225.2
1980													

Source: Portland Cement Association

Shipments of Finished Portland Cement from Mills in the United States In Millions of Barrels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total[1]
1968	17.2	20.2	26.2	34.4	37.4	36.9	41.8	44.1	39.9	45.4	31.0	22.8	397.4
1969	19.1	20.1	26.1	34.6	39.3	41.0	42.4	43.0	43.1	43.6	31.2	26.0	409.8
1970	17.1	20.2	25.7	32.9	36.4	39.7	42.3	41.6	38.2	39.1	29.9	26.4	390.5
1971	17.3	19.4	28.3	36.2	37.8	44.1	42.2	45.1	42.6	43.1	36.0	26.2	420.2
1972	22.4	23.9	32.2	34.6	42.2	45.0	42.3	50.4	44.4	46.0	33.2	24.1	440.5
1973	23.9	24.8	33.6	36.1	46.5	47.2	47.6	53.1	43.4	50.2	38.6	26.5	470.5
1974	22.2	24.6	31.8	38.6	43.1	43.4	42.7	45.2	41.6	45.5	30.7	23.2	431.5
1975	19.2	17.6	21.8	28.8	34.1	36.3	38.9	39.2	38.9	41.7	28.3	22.8	367.4
1976	17.7	20.5	28.1	33.1	34.5	39.9	38.6	41.8	38.9	37.4	31.7	23.2	385.8
1977	14.0	20.9	31.3	35.7	40.2	45.1	40.5	45.5	42.0	43.2	34.5	26.1	418.9
1978	15.3	18.5	31.5	37.2	44.9	49.8	43.8	50.3	44.6	48.5	37.9	29.0	451.3
1979	16.6	18.7	32.4	35.8	44.6	48.2	45.3	50.3	43.1	49.6	38.1	29.2	451.4
1980	22.0	22.1	26.0	33.0	36.3	39.3	39.8	39.6	40.5	43.3	31.8	28.2	402.8
1981													

[1] Does not necessarily agree with monthly figures. These are compiled from producers' annual reports and are final.
Source: Bureau of Mines

Average Wholesale Price of Portland Cement As a 1967 = 100 Base Index[1]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1968	3.436	3.467	3.467	3.468	3.468	3.468	3.468	3.468	3.468	3.468	3.469	3.469	3.465
1969	3.557	3.564	3.580	3.565	3.565	3.565	3.565	3.565	3.566	3.566	3.566	3.566	3.566
1970	3.737	3.735	3.734	3.734	3.741	3.741	3.741	3.741	3.741	3.741	3.741	3.733	3.738
1971	3.983	3.963	3.957	3.958	3.958	3.958	4.059	4.088	4.092	4.092	4.094	4.094[2]	4.025
1972[1]	127.8	128.1	128.1	131.5	131.8	131.9	132.1	134.0	134.2	134.2	134.3	134.3	131.9
1973	134.4	134.4	135.3	138.4	137.6	137.6	137.9	137.9	137.9	138.2	138.3	138.3	137.2
1974	149.5	151.2	151.7	155.5	155.8	156.2	169.8	169.9	170.3	171.1	171.1	171.1	161.9
1975	187.0	189.3	189.4	191.9	193.1	193.1	195.2	195.0	196.5	196.3	196.1	196.1	193.3
1976	203.4	204.0	204.0	212.0	212.0	212.1	214.7	214.7	214.7	214.5	214.5	214.6	211.3
1977	221.1	221.4	221.4	225.4	227.8	227.8	228.8	229.0	229.0	228.9	228.7	228.7	226.5
1978	240.6	240.9	241.1	248.6	248.6	248.6	251.7	254.8	255.7	256.2	253.7	253.7	249.5
1979	272.2	276.4	277.7	280.4	280.4	281.0	282.8	282.9	282.9	282.9	282.9	283.6	280.6
1980	305.8	305.9	306.3	312.6	313.9	313.9	313.3	313.1	309.4	308.9	307.5	307.5	309.8
1981	319.1	319.0											

[1] Prior to 1972 prices are $ per barrel. [2] Price index for Dec. 1971 is 127.8
Source: Bureau of Labor Statistics (1322-0131.16)

Cheese

Cheese production in the U.S. continued to expand in 1980 and early 1981. According to preliminary USDA estimates, production of American cheese increased 7.6 percent in 1980 to 2,354 million pounds and utilized 1.8 billion pounds more milk than in 1979. Production of other cheeses increased to 1,591 million pounds, up 4.2 percent from 1979 and utilized 0.4 billion pounds more milk. Output of American cheese in January and February 1981 increased 17 and 15 percent, respectively, from 1980.

Commercial disappearance of American cheese during 1980 declined more than 4 percent from 1979, which contrasts with an average annual gain of 5.2 percent during the past decade. However, commercial sales of non-American type cheeses in 1980 increased 4½ percent from 1979. Commercial stocks of American cheese at the end of 1980 totaled 401.7 million pounds vs. 403.7 million in 1979. Stocks of American cheese rose to 427.5 million pounds by February 1, 1981 vs. 397.7 million in 1980. During 1980, 40-pound blocks of American cheese averaged $1.33 per pound, up 7.5 percent from 1979. The wholesale price at the end of February 1981 was $1.39½ per pound, off 1½ cents since late November 1980.

CCC stocks of cheese rose dramatically during 1980 from 2.8 million pounds at the end of 1979 to 189.7 million pounds at the end of 1980. Purchases during January–February 1981 continued this trend and were 88 percent larger than in the same period in 1980.

The CCC purchase prices (per pound) for 40-pound blocks of U.S. Grade A and 500-pound barrels of U.S. export grade cheddar were increased on October 1, 1980 to $1.39½ and $1.36½ from $1.32½ and $1.29½, respectively. No change was made in the CCC purchase price on April 1, 1981 as originally scheduled.

Over 231 million pounds of cheese were imported into the U.S. during 1980, a decline of 7 percent from 1979. Because of the U.S. dairy price support program, the government regulates imports of many cheeses (basically those also produced in the U.S.) with quotas. Quota cheese imports declined 14 percent in 1980 from 1979.

World Cheese (Total[1]) Production In Millions of Metric Tons[3]

Year	Argentina	Australia	Canada	China	Czechoslovakia	Denmark	France	W. Germany	Italy	Netherlands	New Zealand	U.S.S.R.	Sweden	Switzerland	United Kingdom	United States
1968	392	163	200		138	233	1,573	387	855	590	231		129	210	266	1,944
1969	395	161	207		137	240	1,316	590	860	606	219	950	127	180	265	1,990
1970	357	172	215		140	244	1,402	600	872	624	228	1,054	133	184	288	2,204
1971[3]	188	78	112		77	120	821	517	401	306	108	463	66	90	162	1,077
1972	205	81	163		80	131	871	545	424	322	104	483	66	96	184	1,181
1973	206	93	165		85	124	885	558	435	333	101	536	68	97	182	1,218
1974	211	96	130		86	145	917	595	543	376	89	565	70	100	215	1,333
1975	226	99	121		90	147	943	618	529	375	89	559	81	104	239	1,275
1976	240	113	125	203	96	152	978	650	537	382	105	655	84	111	204	1,506
1977	236	104	133	208	99	172	1,023	691	553	412	81	655	87	115	207	1,523
1978	239	116	140	210	98	177	1,063	713	583	420	81	691	94	121	216	1,596
1979[2]	241	142	162	215	95	183	1,100	732	623	432	90	704	96	125	233	1,685
1980[4]	248	155	166	270	98	204	1,165	750	595	440	105	700	100	122	232	1,777

[1] Farm & factory production. [2] Preliminary. [3] Data prior to 1971 are in MILLIONS OF POUNDS. [4] Forecast.
Source: Foreign Agricultural Service. U.S.D.A.

Supply and Distribution of All Cheese in the United States In Millions of Pounds

	Supply					Distribution								Am. Cheese
	Production						Dept. of Agriculture				Domestic Disapp.			
Year	Whole Milk[2]	All Cheese[3]	Jan. 1 Commercial Stocks	Imports[4]	Total Supply	Exports & Shipments[5]	Jan. 1 Stocks	Dec. 31 Stocks	Deliveries	Total Disap.	Military	Civilian	Civilian Per Capita	Removed by U.S.D.A. Programs
1968	1,274	1,938	348	171	2,457	26	81	52		2,133	24	2,083	10.6	88
1969	1,266	1,990	353	144	2,487	23	52	1		2,222	17	2,182	10.9	28
1970	1,428	2,201	317	161	2,679	24	1	1		2,345	14	2,317	11.5	49
1971	1,512	2,374	323	136	2,833	29	1	6		2,527	12	2,486	12.2	91
1972	1,644	2,604	301	179	3,085	30	6	—		2,759	10	2,719	13.2	30
1973	1,673	2,685	331	230	3,246	30	—	—		2,888	9	2,849	13.7	3
1974	1,859	2,937	358	316	3,611	36	—	1		3,117	10	3,044	14.4	60
1975	1,655	2,811	494	179	3,484	33	1	2		3,115	10	3,009	14.2	68
1976	2,049	3,337	369	207	3,897	35	2	2		3,417	7	3,358	15.6	38
1977	2,043	3,358	479	210	4,046	38	2	61		3,560	9	3,405	15.7	148
1978	2,074	3,520	486	242	4,248	44	61	30		3,791	11	3,677	16.9	40
1979	2,288	3,715	457	248	4,421	47	30	3		3,908	24	3,819	17.3	40
1980[1]	2,354	3,946	515	231	4,689	47	3	190		3,998	16	3,806	17.1	350
1981[1]			691				190							

[1] Preliminary. [2] Whole milk American cheddar. [3] All types of cheese except cottage, pot and baker's cheese. [4] Imports for consumption. [5] Commercial. *Source: Department of Agriculture*

CHEESE

Cheese Production in the United States In Millions of Pounds

Year	American			Swiss, Including Block	Brick & Munster	Limburger	Neufchatel	Cream Cheese	Italian Varieties	Blue mold	All Other Varieties	Total of All Cheese[2]	Cottage Cheese		
	Whole Milk	Part Skim	Total										Low-Fat	Curd[4]	Creamed[5]
1970	1,423	5.1	1,428	144.0	55.9	2.8	4.8	121.3	393.7	23.3	27.2	2,201	60.1	726.3	978.5
1971	1,512	7.0	1,518	153.8	62.2	2.6	4.5	125.3	453.9	25.2	28.2	2,374	85.2	745.1	1,004
1972	1,644	8.1	1,652	177.8	67.5	2.5	5.0	128.3	512.1	28.5	30.5	2,605	102.4	784.2	1,013
1973	1,673	5.1	1,678	164.2	68.8	2.6	4.2	135.5	565.3	29.8	37.4	2,685	128.0	763.0	958
1974	1,859	3.7	1,862	175.3	72.2	2.4	3.6	146.7	606.1	28.3	40.5	2,937	121.9	689.7	856
1975	1,655	5.4	1,660	173.8	71.7	1.9	5.0	155.3	671.9	28.5	43.5	2,811	129.3	701.0	862
1976	2,049	5.0	2,054	196.3	74.5	1.9	3.6	164.4	747.4	33.9	44.4	3,320	135.4	711.1	875
1977	2,043	4.1	2,046	189.3	71.3	1.7	3.3	173.1	793.5	34.8	44.4	3,358	139.0	684.5	878
1978	2,069	4.9	2,074	209.4	76.2	1.6	3.9	194.3	875.7	35.3	44.2	3,520	153.1	688.4	871
1979[1]	2,184	4.4	2,188	213.3	78.0	1.6	5.2	207.1	929.1	34.6	54.3	3,715	156.6	664.0	838
1980[3]			2,354									3,946			828

[1] Preliminary. [2] Excludes full-skim cheddar and cottage cheese. [3] Estimated. [4] Includes cottage, pot, and baker's cheese with a butterfat content of less than 4%. [5] Includes cheese with a butterfat content of 4 to 19%.
Source: Agricultural Marketing Service, U.S.D.A.

United States Total Cheese Production[1] In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1972	197.0	194.2	227.9	228.1	251.0	258.5	234.9	219.8	199.8	200.0	186.7	206.8	2,605
1973	204.5	194.3	230.4	241.1	266.3	266.7	236.7	216.2	187.4	202.7	205.4	233.7	2,685
1974	240.7	236.6	277.2	277.8	282.7	278.4	252.4	232.9	214.5	219.2	206.4	218.4	2,937
1975	214.3	204.2	240.7	244.4	271.0	275.0	249.2	226.9	214.8	220.2	208.7	242.0	2,811
1976	246.6	237.8	279.0	294.7	315.5	325.4	296.5	285.0	262.4	255.6	257.0	281.1	3,337
1977[2]	265.6	252.5	299.7	304.6	326.0	315.9	280.1	275.6	251.7	256.8	247.7	281.6	3,358
1978	271.1	260.0	314.4	303.7	332.9	332.0	293.6	286.5	265.0	279.4	279.7	301.4	3,520
1979	292.5	272.2	323.0	318.8	340.4	343.8	318.8	309.0	290.7	308.0	289.4	308.7	3,715
1980[2]	310.5	297.9	341.1	332.8	359.6	354.2	329.4	316.7	315.0	328.1	315.0	345.2	3,946
1981[2]	343.9												

[1] Excludes cottage and full skim American. [2] Preliminary. *Source: Department of Agriculture*

Wholesale Price of American Cheese, Fresh Single Daisies at Chicago In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1972	68.4	70.7	72.7	71.9	70.2	70.2	70.7	70.9	70.9	71.8	73.6	74.4	71.4
1973	74.5	74.6	76.5	78.3	79.2	80.2	80.1	84.7	89.8	94.4	97.1	102.0	84.3
1974	104.8	103.9	105.9	104.8	97.9	89.2	88.8	89.8	94.5	96.5	96.2	94.6	97.3
1975	93.6	94.6	95.2	96.8	98.7	100.6	103.0	106.4	111.9	116.4	116.9	119.2	104.4
1976	118.2	108.2	113.8	116.6	114.6	115.3	120.0	125.8	118.3	114.2	114.0	114.0	116.1
1977	114.0	114.0	115.2	119.3	119.3	119.4	119.4	119.4	120.5	120.6	121.1	122.4	118.7
1978	122.9	124.1	124.6	125.9	125.9	125.9	126.0	132.1	134.0	139.4	140.0	141.0	130.1
1979	141.0	135.0	135.6	137.4	137.6	138.9	140.9	145.8	148.8	146.6	144.7	144.4	141.4
1980	146.7	147.2	150.8	153.5	154.2	154.8	155.5	157.0	161.5	165.3	164.1	164.1	156.2
1981	164.0	164.0											

Source: Department of Agriculture

Cold Storage Holdings of All Varieties of Cheese in the U.S., on First of Month In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1972	304.3	291.8	285.4	287.3	311.7	340.4	376.3	407.6	409.7	404.0	379.3	353.6
1973	331.4	324.6	321.0	302.4	303.4	330.6	374.2	392.9	395.5	382.3	371.0	356.0
1974	357.8	366.8	395.5	438.9	489.5	533.4	570.7	566.0	552.4	539.1	512.1	502.2
1975	494.0	485.9	458.5	447.5	441.0	454.8	475.1	477.6	449.7	422.2	388.3	378.5
1976	367.8	362.3	362.3	367.9	393.7	436.1	483.7	509.0	518.0	522.6	501.4	482.0
1977	478.4	485.7	471.2	485.8	510.3	557.2	583.7	592.9	592.9	553.9	502.8	479.8
1978	468.6	459.6	442.0	430.0	447.1	462.5	500.2	498.5	489.7	476.6	455.2	431.0
1979[1]	436.4	436.6	446.2	448.6	462.2	495.3	519.9	555.3	548.5	540.6	526.9	528.2
1980[1]	512.1	515.8	508.9	495.1	513.0	545.5	581.7	619.6	615.1	612.5	593.6	567.0
1981[1]	578.8	601.7	596.3	586.2								

Quantities are given in "net weight." [1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

Chromite

Chromite is the sole source of chromium, which is one of industry's most versatile elements and one of the nation's most important strategic, and critical materials. There is no domestic mine production of chromite and the U.S. continues to be one of the world's leading consumers.

The three chromite-consuming industries are: metallurgical, which used 62 percent of the chromite used in 1980; chemical, which used 22 percent; and the refractory industry, which accounted for 16 percent. The major consumer of chromium is the steel industry, where it is used in widely diversified products such as stainless, tool, and alloy steels; heat and corrosion-resistant materials; and special purpose alloys. Domestic consumption of chromite in 1980 was 20 percent below that of 1979, according to preliminary data of the Bureau of Mines. Consumption dropped 26 percent in the metallurgical industry, 19 percent in the refractory industry, and 1 percent in the chemical industry. Most of the drop in consumption was the result of weak demand for chromium alloys for stainless steel manufacture.

The United States is highly dependent upon imports of chromite. The net import reliance was 91 percent of apparent domestic consumption in 1980. (In 1980, estimated recycled chromium contained in purchased stainless steel scrap amounted to 9 percent of total chromium demand.)

Imports of chromite in 1980 were 4 percent lower than in 1979. Forty-one percent came from the Rep. of South Africa; 17 percent from the USSR, and 14 percent from the Philippines. No chromite was received from the USSR after June, 1980. Imports of ferrochromium were 23 percent higher than in 1979, most of which was high-carbon ferrochromium, primarily from the Rep. of South Africa.

World resources total about 36 billion tons of shipping grade chromite, sufficient to meet conceivable demand for centuries. However, over 99 percent of these resources are in southern Africa; nearly 25 billion tons in the Republic of South Africa and over 11 billion tons in Zimbabwe.

As of November 30, 1980, the U.S. government stockpile of metallurgical-grade chromite totaled 1,957,000 tons vs. a goal of 3,200,000 tons; a chemical-grade stockpile of 242 thousand tons vs. a goal of 675 thousand; and a refractory-grade stockpile of 391 thousand tons vs. a goal of 850 thousand tons. The stockpile also contained the following nonstockpile-grade materials: metallurgical-grade chromite—531,219 tons; chromium ferroalloys—20,762 tons.

World Mine Production of Chromite In Thousands of Short Tons

Year	Albania	Brazil	Cuba	Finland	Greece	India	Japan	Pakistan	Philippines	So. Rhodesia	Turkey	South Africa	Iran	USSR	Yugoslavia	World Total[1]
1970	516		N.A.		29	299	36	32	624	400	572	1,573	220	1,930	44.7	6,672
1971	553		22		16	288	35	27	474	600	665	1,812	194	1,980	38	7,093
1972	615		22		24	325	27	29	385	600	435	1,635	198	2,040	31	6,725
1973	674		22		20	317	26	19	640	600	481	1,818	154	2,100	11	7,381
1974	788	119	22	182	11	437	29	11	584	650	734	2,069	193	2,150	1	8,224
1975	859	191	35	365	39	551	26	11	573	650	790	2,288	190	2,290	2	9,136
1976	915	205	35	193	38	443	24	12	475	952	640	2,656	176	2,300	2	9,372
1977	970	342	35	186	46	389	20	9	593	747	560	3,372	257	2,400	2	10,172
1978	1,100	297	35	196	44	293	10	12	592	527	410	3,466	218	2,500	2	9,920
1979[2]	1,220	330	35	210	60	300	10	10	620	597	500	3,634	150	2,600	2	10,498
1980[1]				200					590	550	450	3,450				9,900

[1] Estimate. [2] Preliminary. *Source: Bureau of Mines*

U.S. Salient Statistics of Chromite In Thousands of Short Tons

Year	Net Import Reliance as a % of Apparent Consumption	Shipments from Gov't Stockpiles	Exports	Imports (For Consumption)	Reexports	Consumption by Primary Consumer Groups (Gross Weight) Total	Metallurgical	Refractory	Chemical	Stocks, Dec. 31 Metallurgical	Refractory	Chemical	Total Stocks	$ Per Metric Tn. South Africa[2]
1970			41	1,405	73	1,403	912	278	213	387	235	111	733	19–27
1971		268	35	1,299	145	1,093	720	193	180	667	233	119	1,019	25–27
1972		191	20	1,056	57	1,140	727	224	189	601	160	96	857	24–27
1973		285	21	931	34	1,387	920	261	206	339	154	104	597	34
1974		500	18	1,102	99	1,447	904	295	251	340	169	64	573	50
1975	91	418	139	1,252	45	881	532	183	166	701	154	97	952	35
1976	89	311	124	1,275	85	1,006	597	202	207	762	136	111	1,009	39
1977	91	517	187	1,293	61	1,000	578	208	214	900	174	264	1,338	59
1978	91	—	23	1,013	29	1,010	534	237	239	755	185	361	1,301	56
1979[1]	90	—	27	1,024	28	1,209	774	193	242	416	161	330	907	56
1980[3]	91	—	25	984	25	966	570	156	239	219	135	316	670	55

[1] Preliminary. [2] Cr_2O_3, 44% (Transvaal). [3] Estimate. *Source: Bureau of Mines*

Coal

Total production of coal in the U.S. in 1980 was a record 835.4 million short tons, almost 7 percent more than the 781.1 million mined in 1979, according to Department of Energy (DOE) data. The 1980 output comprised 830.0 million tons of bituminous coal and lignite and 5.4 million of Pennsylvania anthracite. In 1979, bituminous coal and lignite production totaled 776.3 million tons, and anthracite output totaled 4.8 million tons. Production in 1981 was expected to be affected by the strike of many union miners early in the year.

Preliminary DOE data indicated coal consumption increased 3.7 percent in 1980 to 705.9 million tons from 680.5 million in 1979. Electric utility coal consumption (including bituminous, lignite, and anthracite but not petroleum coke use) increased 8 percent in 1980 to 569.2 million tons from 527.1 million in 1979. Coke plants, the nation's second-largest coal-consuming industry, decreased their use by 14 percent to 66.7 million tons. Consumption by other industrial sectors of the economy (including transportation) in 1980 decreased by 7.6 percent to 62.5 million tons from 67.7 million. Deliveries to residential and commercial users fell by 9.6 percent to 7.6 million from 8.4 million.

Foreign Trade

Imports of bituminous coal in 1980 fell by 0.9 million tons to 1.2 million tons. Exports of bituminous and anthracite in 1980 increased by 39.0 percent to 91.7 million tons from 66.0 million tons in 1979.

The Outlook for Coal

According to a December, 1980 analysis prepared by the Exxon Corporation, total world demand for coal was expected to grow at a 3 percent annual rate from 1979 through 2000. Use of coal for thermal purposes (other than at electric utilities) was expected to reverse its long-term downtrend and increase at a 5 percent annual rate through the 1980s—reflecting both higher oil prices and federal laws requiring conversion of large boilers to coal.

Beginning in the late 1980s, conversion of coal to synthetic gas or liquid petroleum was expected to increase annually by 20 percent between 1979 and 2000, primarily in the U.S., to as much as 10 percent of the world total coal demand, according to the Exxon study. The U.S. was expected by Exxon

World Production of Coal (Bituminous & Lignite) In Millions of Short Tons

Year	Australia	Belgium	Canada	Czechoslovakia	France	W. Germany	India	Japan	China	Poland	South Africa	Un. Kingdom	United States	U.S.S.R.	World Total
1968	70.7	16.3	11.0	111.1	49.8	236.3	82.6	51.7	362.0	171.4	56.9	183.8	556.7	655.0	3,086
1969	76.5	14.4	10.7	117.3	48.0	242.2	87.7	49.6	382.0	182.8	58.2	163.1	571.0	669.9	3,189
1970	80.9	12.6	16.7	121.1	44.3	242.2	85.1	43.7	422.0	190.6	60.3	152.4	612.6	679.2	3,296
1971	79.8	12.1	18.4	125.1	39.4	244.1	82.8	37.5	432	198.4	64.7	162.2	560.9	790.0	3,385
1972	91.9	11.6	20.7	125.0	36.1	241.3	85.8	31.6	442	208.2	64.4	131.7	602.5	805.4	3,423
1973	94.1	9.7	22.6	120.2	31.4	238.1	89.5	25.0	472.0	215.9	68.7	143.5	598.6	735.9	3,399
1974	99.6	6.7	22.3	122.0	21.7	235.4	96.1	22.3	475.0	222.5	71.2	118.7	601.0	671.0	3,264
1975	104.9	6.6	27.9	126.9	22.3	229.4	108.9	20.9	495.0	233.1	74.8	139.1	648.4	688.2	3,418
1976	116.7	6.7	28.1	129.8	22.3	239.4	115.9	20.3	510.0	241.0	82.2	133.9	678.7	698.6	3,523
1977	118.6	7.8	32.6	133.6	22.2	222.3	114.6	20.2	524.0	250.0	97.9	133.0	688.6	708.8	3,593
1978[2]	126.6	7.3	24.8	136.2	21.8	226.2	115.9	20.1	628.0	257.5	97.2	132.0	653.8	711.0	3,687
1979[1]													776.3		
1980															

[1] Estimate. [2] Preliminary. *Source: Bureau of Mines*

Salient Statistics of the Bituminous Coal Industry in the United States

Year	Production (Million Net Tons): Underground	Production: By Augers	Production: By Stripping	Production: Total Production	Value: Total Million $	Value: Avg. Per Ton $	Number of Mines	Thous. of Men Employed	Avg. Number of Days Worked	Net Tons Per Man	Imports (Thousands of Net Tons)	Exports to: Grand Total	Exports to: Canada	Exports to: Europe	Exports to: Asia
1968	344	15.3	186	545	2,546	4.67	5,327	127.9	220	19.37	224	50,637	16,822	15,403	15,839
1969	347	16.4	197	561	2,796	4.99	5,118	124.5	226	19.90	109	56,234	16,905	15,088	21,368
1970	339	20.0	244	603	3,773	6.26	5,601	140.1	228	18.84	36	70,944	18,846	21,503	27,649
1971	276	17.3	259	552	3,905	7.07	5,149	145.7	210	18.02	111	56,633	17,565	16,403	19,705
1972	304	15.6	276	595	4,562	7.66	4,879	149.3	221	17.74	47	55,997	18,161	16,679	18,039
1973	299	15.7	277	592	5,050	8.53	4,744	148.1	227	17.58	127	52,870	16,231	14,253	19,301
1974	277	15.7	312	603	9,502	15.75	5,247	166.7	206	17.58	2,080	59,926	13,706	15,856	27,603
1975	293	40.7	315	648	12,472	19.23	6,168	189.9	232	14.74	940	65,669	16,735	18,972	25,943
1976	295	—384—		679	13,189	19.43	6,161	202.3	232	14.46	1,203	59,406	16,497	20,026	19,271
1977	266	—425—		691	13,705	19.82	6,077	221.4	210	14.84	1,647	53,687	17,000	N.A.	N.A.
1978	242	—423—		665	14,486	21.78	6,230	242.3	166	14.68	2,953	39,825	15,239	10,449	11,344
1979[1]	320	—456—		776	18,243	23.50	6,300	251.7	227	13.50	2,059	64,783	19,158	22,744	17,608
1980[2]	334	—496—		830	21,580	26.00	6,300	245.0	225	15.09	1,194	89,882	17,039	40,414	25,481
1981															

[1] Preliminary. [2] Estimate. *Sources: Bureau of Mines; Dept. of Commerce*

to continue as the world's largest coal producer, its share of world coal supply was expected to increase from 23 percent in 1979 to about 28 percent by 2000. Europe's coal production was expected to increase only slightly in the same period. Direct industrial use of coal was projected by Exxon to increase about 6 percent per year between 1979 and 2000.

Reserves

The U.S. has the largest proven coal reserves of any nation on earth (in excess of 400 billion short tons, according to DOE estimates). These reserves, sufficient to meet domestic energy needs for centuries, have become the focal point of increasing attention as concern about U.S. dependence on imported petroleum has grown. A variety of technical problems have prevented switching from petroleum to coal as a source of energy on a large scale. Among the most important issues are: environmental problems relating to both the production and burning of coal, such as reclamation of abandoned strip mines and the installation of scrubbers on utility smoke stacks, and the full-scale development of economical liquification and gasification processes.

United States Production of Coal by Principal States In Millions of Short Tons

Year	Anthracite Pennsylvania	Bituminous Alabama	Colorado	Illinois	Indiana	Kentucky	Montana	Ohio	Pennsylvania	Virginia	West Virginia	Tennessee	Wyoming	Total Bituminous	Total U.S.
1968	11.5	16.4	5.6	62.4	18.5	101.2		48.3	76.2	37.0	145.9	8.1		545.2	556.7
1969	10.5	17.5	5.5	64.7	20.1	109.0		51.2	78.6	35.6	141.0	8.1		560.5	571.0
1970	9.7	20.6	6.0	65.1	22.3	125.3		55.4	80.5	35.0	144.1	8.8		602.9	612.6
1971	8.7	17.9	5.3	58.4	21.4	119.4		51.4	72.8	30.6	118.3	9.3		552.2	560.9
1972	7.1	20.8	5.5	65.5	25.9	121.2		51.0	75.9	34.0	123.7	11.3		595.4	602.5
1973	6.8	19.2	6.2	61.6	25.3	127.6		45.8	76.6	34.0	115.4	8.2		591.7	598.5
1974	6.6	19.8	6.9	58.2	23.7	137.2		45.4	80.5	34.3	102.5	7.5		603.4	610.0
1975	6.2	22.6	8.2	59.5	25.1	143.6	22.1	46.8	84.1	35.5	109.3	8.2	23.8	648.4	654.6
1976	6.2	21.5	9.4	58.2	25.4	144.0	26.2	46.6	85.8	40.0	108.8	9.3	30.9	678.7	684.9
1977	5.9	21.5	12.0	53.5	27.8	146.3	27.2	47.9	84.6	37.6	95.4	9.4	46.0	691.3	697.2
1978	6.2	20.6	13.8	48.6	24.2	135.7	26.6	41.2	81.5	31.9	85.3	10.0	58.3	665.1	671.3
1979[2]	4.8	23.9	18.1	59.5	27.5	149.8	32.5	43.5	89.2	37.0	112.4	9.3	71.8	776.3	781.1
1980[1]	5.4	27.0	19.5	63.2	29.9	149.2	31.1	39.5	86.2	49.0	120.0	11.6	94.0	830.0	835.4
1981															

[1] Estimate. [2] Preliminary. *Source: Bureau of Mines*

U.S. Consumption & Stocks of Bituminous Coal & Lignite In Millions of Short Tons

Year	Stocks—Dec. 31						Consumption						
	Electric Power Utilities	Oven Coke Plants	Steel & Rolling Mills	Other Industrials	Retail Dealers	Total	Electric Power Utilities	Coke Plants Beehive	Coke Plants Ovens	Steel & Rolling Mills	Other Industrials	Retail Deliveries[2]	Total
1970							318.9	1.4	94.6	5.4	82.9	12.1	515.6
1971							326.3	1.3	81.5	5.6	68.7	11.4	494.9
1972							348.6	1.1	86.2	4.9	67.1	8.7	516.8
1973							386.9	1.3	92.3	6.4	60.8	8.2	556.0
1974							390.1	1.3	88.4	6.2	57.8	8.8	553.0
1975	109.7	8.7	— 8.5—		.2	127.2	403.2	1.1	82.1	2.7	59.8	7.3	557.5
1976	116.4	9.8	— 7.1—		.2	133.6	447.0	.9	83.4	2.7	57.8	6.9	598.8
1977[1]	130.9	12.7	—11.0—		.2	154.9	475.7	.6	76.7	3.2	57.1	7.0	620.5
1978[1]	126.0	8.2	— 9.0—		.4	143.6	480.2	.5	70.6	——62.2——		7.9	621.3
1979[1]	156.4	10.0	—11.6—		.3	178.4	526.0	——77.0——		——67.1——		7.1	677.3
1980[3]	182.0	9.0	—11.0—		.3	200.0	569.2	——66.7——		——62.5——		7.6	702.4
1981													

[1] Preliminary. [2] To other consumers. [3] Estimate. *Source: Bureau of Mines*

COAL

Bituminous Coal Production[1] in the United States In Millions of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1970	46.7	47.1	52.2	50.7	49.2	49.9	39.8	53.0	54.3	55.9	51.2	53.0	602.9
1971	49.8	47.0	56.9	54.3	50.4	49.3	39.5	56.2	54.4	11.9	26.3	56.0	552.2
1972	49.7	49.1	54.4	49.8	52.9	50.1	41.0	52.2	49.4	51.7	50.3	44.9	595.4
1973	49.4	45.9	50.5	47.0	51.4	46.6	43.8	55.9	48.3	54.4	49.8	48.7	591.7
1974	53.7	50.1	51.3	54.4	57.7	48.1	49.4	51.8	52.7	60.5	33.7	40.2	603.4
1975	55.2	51.8	52.6	53.8	55.9	56.2	46.0	51.8	56.1	60.4	54.0	54.8	648.4
1976	52.6	53.8	60.9	59.1	57.9	59.7	44.3	53.6	60.6	58.9	58.8	58.4	678.7
1977	44.6	50.4	65.0	59.3	62.2	62.8	49.4	57.6	69.2	67.4	68.7	30.9	691.3
1978	23.1	23.5	38.8	59.5	62.2	65.6	53.6	64.4	57.8	69.9	69.2	59.6	665.1
1979	56.5	53.6	65.5	62.8	67.9	69.4	54.5	72.1	63.9	75.9	67.6	60.3	776.3
1980[2]	67.8	64.3	69.9	69.9	70.4	71.4	60.7	70.2	72.1	75.8	65.5	72.1	830.0
1981													

[1] Includes small amount of lignite. [2] Preliminary. *Source: Bureau of Mines*

Average Wholesale Price of Anthracite Coal (Chestnut—F.O.B. Mine) Index—1967 = 100[1]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1969	14.96	15.00	15.00	14.71	14.22	14.22	14.78	14.78	15.27	15.27	15.76	16.25	15.10
1970	16.35	16.35	16.35	16.35	15.76	15.76	15.95	15.95	16.64	16.99	18.17	18.17	16.57
1971	18.37	18.37	18.37	18.37	17.58	16.86	17.35	17.35	17.44	17.35	17.35	17.35	17.67
1972	17.738	17.738	17.738	17.738	17.738	17.738	17.738	18.130	19.110	19.110	19.110	19.110	18.228
1973	19.110	19.110	19.110	19.600	19.600	19.600	19.845	20.458	20.703	20.703	21.070	21.621	20.040
1974	21.621	22.785	22.785	26.031	26.031	26.031	29.951	31.421	34.116	35.464	41.711	41.711	29.972
1975	41.711	41.711	41.711	41.711	46.428	46.428	46.428	46.428	46.428	46.428	46.428	46.428	44.856
1976	46.428	46.428	46.428	46.428	46.428	46.428	46.428	46.428	46.428	46.428	46.428	46.428	46.428
1977	46.550	46.550	46.550	46.550	46.550	46.650	46.650	46.579	46.579	46.579	46.579	46.579	46.579
1978	46.579	46.579	46.579	46.579	—	47.192	47.192	47.498	47.542	47.537	47.530	47.675	47.135
1979[1]	46.677	47.677	47.677	407.3[1]	407.6	407.6	407.6	409.7	413.8	413.8	418.6	423.7	411.0
1980	435.6	435.7	435.7	459.7	459.7	459.7	462.1	469.8	478.4	479.4	491.2	497.9	463.8
1981	508.7	536.8											
1982													

[1] Prior to Apr. 1979 data are in DOLLARS PER SHORT TON. *Source: Bureau of Labor Statistics* (0511-0101.02)

Average Wholesale Price of Bituminous[1] Coal (Screenings, Industrial Use) Index—1967 = 100[2]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1969	5.804	5.804	5.804	5.347	5.897	5.932	6.068	6.068	6.068	6.342	6.470	6.514	6.052
1970	6.526	6.926	7.037	7.758	7.819	8.224	8.280	8.424	8.858	9.747	9.747	9.747	7.641
1971	9.747	9.316	9.316	9.810	9.719	9.719	9.719	9.719	9.719	9.719	9.719	10.131	9.696
1972	10.266	10.266	10.266	10.146	10.146	10.146	10.146	10.146	10.426	10.443	10.933	11.209	10.378
1973[2]	11.209	11.311	11.160	11.541	11.570	11.616	11.551	11.551	12.040	12.129	13.010	245.9[2]	222.5
1974	255.2	258.4	265.2	311.5	315.8	330.7	351.9	366.2	379.1	402.6	402.5	435.4	339.5
1975	435.9	415.4	391.8	390.8	389.6	386.0	382.0	377.3	372.4	370.2	363.0	370.1	387.0
1976	368.9	368.0	366.9	366.4	366.0	365.8	366.7	366.7	366.8	367.0	368.0	373.0	367.5
1977	375.3	376.5	378.0	379.1	386.1	389.7	392.2	393.7	394.4	397.0	399.4	401.6	388.6
1978	403.2	404.6	406.5	426.4	432.4	434.5	437.2	441.9	442.9	444.1	442.9	442.8	430.0
1979	443.8	444.2	145.5	447.4	451.2	452.4	452.0	454.6	452.8	454.9	455.6	458.7	451.1
1980	459.1	459.4	461.6	464.4	468.9	465.9	466.7	467.8	471.0	469.9	474.3	474.1	466.7
1981	475.7	478.2											
1982													

[1] Prices are for Screenings, industrial use, f.o.b. mine. [2] Prior to Dec. 1973 data are in DOLLARS PER SHORT TON.
Source: Bureau of Labor Statistics (0512-0208.02)

U.S. Stocks of Bituminous Coal for All Industrial & Retail Dealers, at End of Month In Million Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1971	88.3	85.8	89.5	97.1	102.9	107.1	102.8	111.4	117.0	100.4	85.6	90.0
1972	92.9	93.6	97.9	103.7	110.6	114.5	109.7	112.9	114.3	118.0	119.2	116.5
1973	111.1	108.9	111.5	112.6	116.9	110.0	107.5	106.9	106.2	107.5	107.1	102.2
1974	97.8	95.8	101.6	107.2	112.9	111.9	106.2	105.5	109.2	118.7	109.2	95.5
1975	95.5	97.2	97.9	102.8	109.7	114.9	109.1	108.5	111.9	120.3	125.8	127.1
1976	119.1	119.0	123.4	128.3	134.6	140.2	129.6	123.7	129.9	133.6	134.1	133.7
1977[1]	118.1	114.4	122.6	129.9	137.7	145.9	137.5	136.8	145.0	158.2	173.1	152.3
1978[1]	118.1	93.1	83.9	96.5	110.9	121.6	119.8	122.6	125.6	143.6	142.6	141.6
1979[1]	131.9	125.1	130.0	137.7	147.0	150.6	144.1	148.1	153.7	167.2	176.1	178.4
1980[1]	175.8	173.1	173.0	180.3	189.9	195.1	181.7	181.3	189.8			

[1] Preliminary. *Source: Bureau of Mines*

Statistical Trends in the Pennsylvania Anthracite Industry

Year	Production (Millions of Net Tons) Total	Production By Stripping	Production Loaded Mech. Under.	Value of Production Million $	Avg. Value Per Net Ton	Stocks (Dec. 31) Electric Utilities	Stocks (Dec. 31) Retail Dealers'	Exports to: Total	Exports to: Canada	Exports to: France	Exports to: Netherlands	Exports to: Italy	Apparent Consumption	Avg. No. of Men Working Daily (1,000)	Avg. Number of Days Worked	Avg. Tons Per Man Per Day
						(1,000 Net Tons)										
1970	9.7	4.5	1.2	105.3	10.83	1,099	202	789	438	229	1	61	8,248	5.9	234	7.10
1971	8.7	4.5	.7	103.5	11.86	1,123	182	671	466	101	1	—	7,338	5.8	239	6.30
1972	7.1	3.5	.6	85.3	12.00	895	123	743	500	155	—	32	5,915	4.8	216	6.88
1973	6.8	3.3	.4	90.3	13.65	1,066	106	717	478	106	39	28	5,671	4.1	234	7.15
1974	6.6	2.9	.3	144.7	22.19	930	91	735	481	166	11	18	5,448	3.8	219	7.87
1975	6.2	2.6	.3	198.5	32.26	982	59	640	544	39	16	11	5,108	3.9	214	7.45
1976	6.2	3.0	.3	209.2	33.92	1,000	33	615	445	105	16	—	5,040	3.7	235	7.19
1977	5.9	3.1	.4	202.4	34.86	2,231	38	625	526	20	—	33	4,803	3.7	229	6.97
1978	5.0	3.0		177.6	35.25			869	405				3,895	3.5	223	6.51
1979[1]	4.8							1,233	341	162	82	19				
1980[1]	5.4							1,795	421	266	127	19				

[1] Preliminary. *Source: Bureau of Mines*

Average Sales Realization of Anthracite Coal[4] at Preparation Plants In Dollars Per Net Ton

Year	Chestnut	Stove	Lump[2] & Broken	Pea	Egg	Pea & Larger	Buckwheat No. 1	Buckwheat No. 2[3]	Buckwheat No. 3[1]	Buckwheat No. 4	Buckwheat No. 5	Buckwheat Other	Total Steam	Total All Sizes
1970	15.67	15.41	—	13.87	14.93	15.06	13.26	13.14	11.06	7.40	5.65	4.00	8.92	11.03
1971	16.79	16.65	16.00	15.28	17.76	16.39	14.83	14.56	12.56	8.07	6.08	4.44	9.90	12.08
1972	17.66	17.73	—	15.72	18.11	17.18	15.38	15.12	12.97	9.11	5.93	5.16	10.14	12.40
1973	19.30	19.51	—	16.98	19.55	18.76	16.60	16.77	14.11	10.78	8.39	5.78	11.30	13.65
1974	31.06	31.54	—	27.61	32.91	30.41	28.36	26.73	23.16	19.35	18.82	8.77	18.88	22.19
1975	45.34	46.59	—	42.33	45.82	45.04	43.50	39.86	37.43	33.80	25.74	12.29	27.61	32.26
1976	47.13	49.21		42.02	49.08	46.71	43.03	41.20	39.53	35.68	28.30	14.24	29.11	33.92
1977	44.92	47.00	—	39.32	51.36	44.74	42.01	38.86	39.50	37.31	25.51	21.84	31.15	34.86
1978						46.63								35.25

[1] Barley. [2] Quantity of Lump included is insignificant. [3] Rice. [4] Exclusive of dredge coal. *Source: Bureau of Mines*

Pennsylvania Anthracite Coal Production[1] In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1971	725	654	780	795	782	740	620	813	767	710	685	656	8,727
1972	583	542	622	487	706	515	465	688	611	682	650	555	7,106
1973	522	568	641	581	641	609	434	587	532	614	582	519	6,830
1974	516	458	531	563	589	505	443	620	516	641	610	625	6,617
1975	540	535	544	270	535	544	455	535	500	560	555	630	6,203
1976	525	440	525	520	555	630	490	590	515	555	490	475	6,228
1977	390	420	484	553	476	479	474	479	471	587	513	535	5,861
1978	350	430	610	520	540	595	570	680	575	535	575	440	6,160
1979	343	285	396	406	430	411	343	435	401	493	469	423	4,835
1980[2]	470	350	460	510	500	495	525	425	400	460	425	380	5,400

[1] Represents production in Pennsylvania only. Production outside which is small, is included in Bituminous Production series.
[2] Preliminary. *Source: Bureau of Mines*

Cobalt

Cobalt is considered a critical material because of its uses as: (1) a high-temperature-resistant alloy in jet engines; (2) a binder in cemented carbides for metal cutting; (3) in mining tools (drill bits, valves, and pipes), hard facing (chain saws, shovel teeth, scrapers, etc.) and drawing and forming dies and rolls for the manufacture of steel, and; (4) a desulfurizing catalyst in refining and processing crude oil. It is also viewed as a strategic material because the U.S. is heavily dependent upon foreign sources of supply, which are concentrated in a few areas of the world, particularly for the higher grade deposits.

Net import reliance of the U.S. on imports of cobalt represented about 93 percent of apparent domestic consumption in 1980. Recycled cobalt from purchased scrap accounted for the remainder of reported consumption. Imports of cobalt in 1980 were about 18 percent less than in the previous year. Major import sources in the 1976–79 period were: Zaire—42 percent; Belgium-Luxembourg (mostly Zairian origin)—16 percent; Zambia—13 percent; Finland—6 percent; others—23 percent.

Domestic demand for cobalt declined for the second consecutive year in 1980, dropping 8 percent from the 1979 level, according to preliminary data of the U.S. Bureau of Mines. The consumption of cobalt in superalloys continued strong in 1980, exceeding the level of use in 1979 by more than one million pounds, whereas consumption in magnetic alloys, cutting and wear-resistant materials, catalysts and driers experienced declines. Of the total domestic demand for cobalt in 1980, superalloys—mainly for industrial and aircraft gas turbine engines—accounted for about 45 percent; magnetic materials for various electrical applications—15 percent; metal cutting and mining tool bits—15 percent; catalysts—10 percent; driers—10 percent; others—5 percent.

A 70 percent allocation implemented by the major U.S. dealer on May 1, 1978 was lifted July 3, 1980 because producer stocks had risen above normal. U.S. consumer stocks of cobalt were reported to have dropped sharply in 1980, but the producer price remained unchanged at $25/lb. in 1980. Dealer prices fluctuated between $18 and $24/lb.

As of November 30, 1980, the U.S. stockpile of cobalt totaled 20,402 tons, vs. a goal of 42,700 tons.

World Mine Production of Cobalt In Short Tons of Contained Cobalt

Year	Australia	Zaire (Congo Repub.)	USSR (Metal)	France (Metal)	Canada	Cuba	Philippines	Finland	W. Germany (Metal)	Japan (Metal)	Norway (Metal)	Morocco	Zambia	New Caledonia	World Total
1969	269	11,680	1,650	900	1,628	1,700	N.A.	1,300	937		810	1,554	1,997	N.A.	21,778
1970	517	15,386	1,700	335	2,281	1,700	N.A.	1,400	911		862	666	2,645	N.A.	26,295
1971	877	16,003	1,750	635	2,161	1,700	N.A.	1,400	662		958	1,078	2,330	N.A.	27,299
1972	849	14,453	1,800	853	1,676	1,700	N.A.	1,400	504		353	1,766	3,687	N.A.	27,376
1973	848	16,625	1,850	922	1,672	1,800	45	1,400	408		1,005	1,567	3,460	1,900	29,268
1974	1,188	19,436	1,900	848	1,724	1,800	33	1,400	392	11	1,365	1,793	2,622	2,113	34,045
1975	2,986	15,400	2,000	848	1,492	1,800	129	1,545	375	53	852	2,162	2,627	3,770	34,000
1976	600	12,100	2,000	799	1,495	1,800	542	1,409	276	568	635	1,030	2,398	90	23,609
1977	1,100	11,600	2,100	818	1,637	1,800	1,195	1,353	386	1,205	777	1,119	1,878	120	24,084
1978	1,500	14,660	2,150	960	1,360	1,800	1,313	1,429	330	2,055	575	1,250	1,911	170	27,831
1979[2]	1,700	16,535	2,000	795	1,522	1,900	1,430	1,320	365	2,866	751	1,000	3,500	230	31,437
1980[1]	1,700	15,000			1,500		1,400	1,300				1,000	3,400	200	29,800

[1] Estimate. [2] Preliminary. *Source: Bureau of Mines*

U.S. Salient Statistics of Cobalt In Thousands of Pounds of Contained Cobalt

					Consumption By End Uses												
Year	Net Import Reliance as a % of Apparent Consumption	Cobalt Pdt's Production	Consumer Stocks Dec. 31	Imports for Consumption	Steel Full Alloy	Stainless & Heat Resisting	Catalysts[4]	Super-Alloys	Tool Steel	Magnetic Alloys	Nonferrous Allows	Drier in Paints, etc.[5]	Cutting & Wear-Resistant Mater.	Welding & Hard Facing Rods	Total	Price $ Per Pound[3]
1969		3,135	2,191	12,911	282	73	689	3,675	570	2,560	660	2,577	1,747	302	15,608	1.85–2.2
1970		2,999	1,890	12,417	136	114	402	2,322	534	2,374	549	2,616	1,395	181	13,367	2.20
1971		3,220	1,411	10,912	196	50	919	1,983	318	2,278	532	2,744	1,230	246	12,500	2.2–2.45
1972		3,142	1,193	13,915	217	39	1,245	3,012	361	3,441	651	2,691	1,273	199	14,130	2.45
1973		4,119	2,451	19,238	226	32	1,793	3,282	518	4,302	789	3,569	2,511	391	18,741	2.45–3.3
1974		4,636	2,047	16,122	249	39	1,905	4,090	690	3,457	780	3,635	2,578	423	18,861	3.1–3.75
1975	98	2,960	1,801	6,608	207	32	421	1,494	233	2,024	669	1,964	1,276	298	12,787	3.75–4
1976	98	4,608	3,180	16,487	251	37	1,446	1,772	151	3,521	742	3,089	1,385	454	16,482	4–5.40
1977	97	4,563	3,738	17,548	354	72	1,285	3,097	231	3,466	624	2,883	1,256	376	16,577	5.20–6.40
1978	95	6,341	4,387	19,029	250	135	1,623	4,299	379	3,768	590	5,399	1,837	725	19,994	6.40–20
1979[1]	94	4,212	3,390	19,998	247	137	1,882	5,276	413	3,266	392	1,695	2,123	444	17,402	20–25
1980[2]	93		2,414	16,311	110	43	1,584	6,191	280	2,251	118	1,329	1,134	578	16,706	25

[1] Preliminary. [2] Estimate. [3] 97 to 99% cobalt, per contract. [4] Prior to 1976 are for chemical & ceramics. [5] Prior to 1979 are for salts & driers. *Source: Bureau of Mines*

Cocoa

World cocoa bean production for the 1980/81 season ending September 30, 1981 was estimated by the USDA in early 1981 at 1.63 million tonnes, about the same as the estimated record-high 1979/80 production. Africa's output was estimated to be reduced by about 5 percent from the previous season's level, while an increase of more than 7 percent was estimated for South American production.

World cocoa bean grindings in calendar year 1980 were estimated by the USDA to have increased slightly from 1979 grindings, to 1.48 million tonnes, but well below estimated production levels, indicating a buildup in world stocks for the fourth consecutive year. World stocks were expected to increase by 133,000 tonnes in 1981, following gains of 146,000, 46,000, and 105,000 tonnes in the preceding three years.

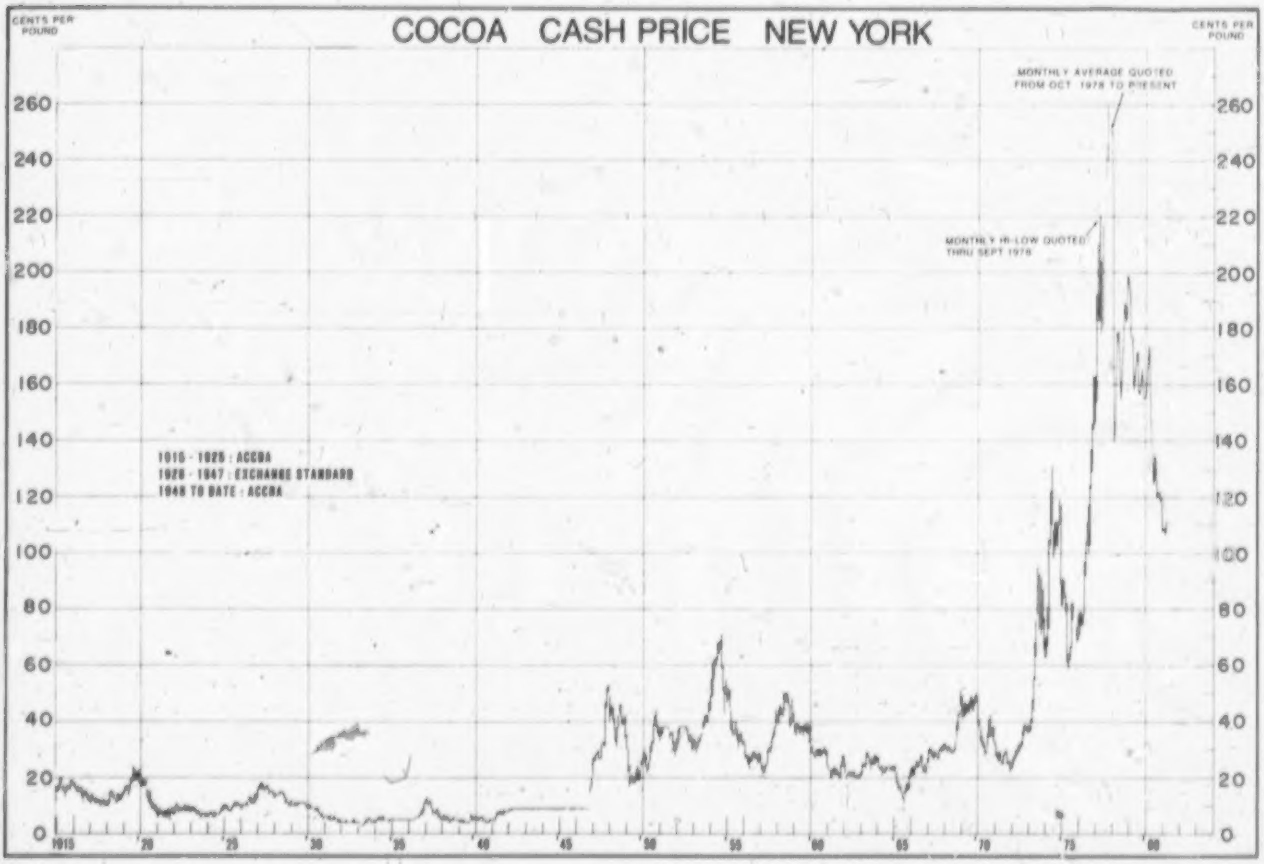
U.S. imports of cocoa beans in 1980 declined about 10 percent to 332.4 million pounds, while cocoa butter imports increased more than 12 percent to 76.4 million pounds. Unsweetened chocolate imports declined more than 8 percent to 96.5 million pounds, and unsweetened cocoa imports increased 2 percent to 144.6 million pounds.

The U.S. cocoa grind in 1980 totaled 312 million pounds, down 12 percent from the 1979 level. However, the fourth quarter grind was significantly higher than in the same quarter of 1979 as some manufacturers apparently used more beans for processing rather than importing the more expensive chocolate liquor and cocoa butter. U.S. confectionery shipments for calendar 1980 were expected by the USDA to have totaled around 2.07 billion pounds, nearly 2 percent below the 1979 shipments.

A new 3-year International Cocoa Agreement was approved in Geneva in November, 1980, under which a buffer stock of up to 250,000 tonnes of cocoa beans would be acquired, starting when an indicator price fell below $1.10 per pound. The agreement was scheduled to become effective when ratified by governments representing 80 percent of exports and 70 percent of imports. However, as of mid-March 1981, neither the Ivory Coast (the world's largest producer) nor the United States (the world's largest consumer of cocoa) had ratified the pact.

Futures Markets

Cocoa futures are traded on the Coffee, Sugar & Cocoa Exchange, Inc. in New York; the London Terminal Market; and on smaller exchanges in Amsterdam, Paris, and Hamburg.



COCOA

World Cocoa Supply and Demand In Thousands of Metric Tons

Crop Year[1]	Stocks Oct. 1	Net World Crop[2]	Total Avail-ability	Seasonal Grindings	Closing Stocks	Stock Change	Crop Year[1]	Stocks Oct. 1	Net World Crop[2]	Total Avail-ability	Seasonal Grindings	Closing Stocks	Stock Change
1969–0	433	1,421	1,854	1,354	500	+ 67	1976–7	412	1,326	1,738	1,423	315	− 97
1970–1	500	1,484	1,984	1,415	569	+ 69	1977–8	315	1,488	1,803	1,371	432	+117
1971–2	569	1,567	2,136	1,515	621	+ 52	1978–9	432	1,465	1,897	1,425	472	+ 40
1972–3	621	1,384	2,005	1,605	400	−221	1979–0[3]	472	1,601	2,073	1,452	621	+149
1973–4	400	1,434	1,834	1,505	329	− 71	1980–1[4]	621	1,568	2,189	1,476	713	+ 92
1974–5	329	1,533	1,862	1,429	433	+104	1981–2						
1975–6	433	1,495	1,928	1,516	412	− 21							

[1] Crop year season is OCT.–SEPT. [2] The Net World Crop is obtained by adjusting the Gross World Crop for one per cent loss in weight. [3] Preliminary. [4] Forecast. *Source: Gill and Duffus, Ltd.*

Raw Cocoa Grindings in Selected Countries In Thousands of Metric[2] Tons

Year	Total	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
	France					Germany (West)					Holland				
1969	42.4	11.9	11.4	8.2	10.9	120.3	34.5	25.8	26.3	33.7	108.9	28.7	25.5	25.8	28.9
1970	38.9	10.1	9.6	8.3	10.9	123.8	31.8	29.2	28.6	34.2	113.0	27.9	26.7	29.0	29.4
1971	41.0	10.8	12.1	8.7	11.2	130.8	33.2	30.1	30.3	37.2	118.6	30.6	27.6	27.3	33.1
1972[2]	48.0	11.0	12.2	10.1	14.7	138.8	34.4	32.6	31.6	40.2	124.4	31.9	31.1	28.5	33.1
1973	47.3	14.5	12.9	8.7	11.1	152.4	41.0	39.5	33.8	38.0	122.6	33.2	31.1	26.3	32.0
1974	36.9	11.1	9.5	7.4	9.0	138.2	37.1	31.8	30.8	38.5	114.9	33.4	28.0	23.0	30.4
1975	34.3	9.7	9.1	6.9	8.6	139.0	40.1	34.0	30.0	34.8	119.4	33.3	27.4	26.5	32.2
1976	35.7	10.1	9.5	7.2	8.8	140.6	36.2	35.2	30.6	38.6	127.3	34.6	31.8	25.9	35.1
1977	36.3	10.7	10.5	7.5	7.7	142.3	38.3	32.3	30.5	41.2	126.1	34.9	32.0	26.6	32.6
1978	40.0	10.8	10.9	7.3	10.9	143.6	39.8	34.7	30.3	38.8	125.9	34.0	31.5	26.7	33.8
1979	43.3	11.4	11.5	8.8	11.4	142.3	37.6	34.8	30.3	39.5	127.4	35.4	29.3	29.8	33.0
1980[1]	43.1	12.5	10.9	9.1	10.7	151.2	40.2	35.4	32.9	42.6	132.6	35.1	31.4	29.5	36.7
1981[1]							41.7					36.0			
	Italy					United Kingdom					United States				
1969	41.8	11.6	11.4	7.2	11.7	90.9	23.8	25.1	20.1	21.9	264.8	68.3	65.2	63.2	68.1
1970	41.7	11.5	10.4	9.6	10.3	81.1	21.0	21.0	17.7	21.4	261.3	64.2	69.0	60.9	67.2
1971	39.0	9.1	9.1	10.1	10.8	83.1	20.2	19.9	18.3	24.7	274.7	64.7	66.8	65.8	77.4
1972[2]	40.6	9.8	8.7	9.8	12.3	97.7	22.0	24.2	24.2	27.3	289.0	79.3	66.1	63.2	80.4
1973	42.9	10.8	10.9	11.4	9.8	107.0	29.1	28.2	23.9	25.8	278.5	77.9	73.4	60.7	66.5
1974	36.3	12.8	8.2	5.1	10.2	93.1	27.7	25.9	21.4	18.0	229.6	67.6	58.8	54.5	48.7
1975	29.1	8.4	6.4	5.9	8.5	72.5	20.2	18.1	15.4	18.8	207.8	43.7	51.7	53.2	59.3
1976	35.4	8.6	9.0	7.8	9.9	83.0	22.3	21.6	17.9	21.2	225.3	60.9	55.0	55.0	54.5
1977	26.4	5.9	6.9	5.3	8.3	75.3	22.0	20.5	16.4	16.4	183.7	56.5	46.9	40.9	39.4
1978	30.1	7.0	8.5	6.3	8.2	72.4	21.0	19.0	15.9	16.5	162.7	42.0	38.4	36.9	45.3
1979	33.6	6.0	10.0	6.9	10.4	60.6	17.7	15.9	12.3	14.7	160.3	40.5	41.4	41.4	37.0
1980[1]		8.0	8.4			65.3	15.5	16.1	15.5	18.2	141.6	33.5	30.8	34.9	42.4
1981[1]												48.4			

[1] Preliminary. [2] Data prior to 1972 are in THOUSANDS OF LONG TONS. *Source: Gill and Duffus, Ltd.*

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World Production of Cocoa Beans in Principal Producing Countries In Thousands of Metric Tonnes

Crop Year[1]	Brazil	Colombia	Dominican Rep.	Ecuador	Equatorial Guinea[4]	Cameroon	Ghana	Ivory Coast	Nigeria	Sao Tome & Principe	Trinidad & Tobago	Venezuela	Asia & Oceania	World Total
1968–9	165	19	21.0	53.0	38	103.8	338.9	145	192	9	4.7	18	41	1,242
1969–0	201	19	43.0	55.0	24	108.3	416	181	223	9.7	5	19	35.8	1,435
1970–1	182	21	25	61	30.0	111.7	392.0	180	308	10.4	4.1	18.9	44	1,499
1971–2	167	22	41	67	22	123	464	226	255	10.0	5	17	45	1,583
1972–3	162	23	28	43	10	107	418	181	241	11	5	19	40	1,398
1973–4	246	23	30	72	12	110	350	209	215	10	4	17	53	1,448
1974–5	273	25	27	78	13	118	377	242	214	7	5	19	57	1,549
1975–6	258	26	30	63	10	96	397	231	216	8	3	15	60	1,510
1976–7	234	29	30	72	6	82	320	230	165	6	4	15	60	1,339
1977–8	283	29	30	75	6	108	268	304	205	6	4	18	64	1,503
1978–9	314	31	33	90	6	106	250	312	137	5	3	17	69	1,480
1979–0[3]	294	30	27	98	6	122	290	373	169	5	2	17	77	1,617
1980–1[2]	350	35	27	75	8	115	255	352	165	5	3	18	79	1,584
1981–2														

[1] Crop years are for the 12 months October 1 to September 30. [2] Forecast. [3] Preliminary. [4] Includes Fernando Po & Rio Muni. *Source: Gill & Duffus, Ltd.*

World Absorption (Consumption) of Cocoa[2] In Thousands of Metric Tonnes

Year	Japan	Australia	Belgium	Brazil	Canada	Colombia	France	W. Germany	Netherlands	Spain	Italy	Switzerland	USSR	United King.	United States	World Total
1968	32	14	18	59	18	34	50	139	112	34	41	16	97	93	291	1,410
1969	33	13	17	52	18	34	43	122	111	38	42	15	99	92	269	1,353
1970	35	13	19	61	16	35	40	126	115	28	42	17	102	82	266	1,355
1971	36	13	20	69	16	36	42	133	121	30	40	17	110	84	279	1,438
1972	36	16	20	90	19	36	49	139	124	31	41	18	132	98	289	1,565
1973	38	16	21	87	18	32	47	152	123	34	43	18	134	107	278	1,556
1974	30	16	22	104	16	31	37	138	115	36	36	17	143	93	230	1,478
1975	29	14	19	98	11	32	34	139	119	34	29	15	150	73	208	1,462
1976	32	16	19	116	13	31	36	141	127	38	35	16	140	83	225	1,525
1977	26	15	16	120	11	24	36	142	126	34	26	16	85	75	184	1,367
1978	21	12	15	136	11	24	40	144	126	32	30	14	90	72	163	1,391
1979[1]	22	11	17	180	10	29	43	142	127	34	34	14	120	61	160	1,437
1980[3]	25	10	21	190	11	30	43	146	130	35	34	16	130	60	135	1,468
1981																

[1] Preliminary. [2] Figures represent the "absorption," "disappearance" or "grindings" of cocoa beans in each country—in other words, net imports of cocoa beans adjusted for changes in stock. [3] Estimate. *Source: Gill & Duffus, Ltd.*

Cocoa Outturns and Sales of the Bahia Crops In Thousands of Bags of 60 Kilos

Year	Outturns			Cumulative Sales of Cocoa Beans (Crop Year Ending April)											
	Main Crop (Oct.-Apr.)	Temporao Crop (May-Sept.)	Total	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1968	871	1,749	2,620	2,580	2,671	2,753	2,774	546	695	978	1,209	1,368	1,546	1,567	1,578
1969	1,529	1,682	3,211	1,640	1,737	1,783	1,783	657	961	1,457	1,576	1,808	2,458	2,582	2,789
1970	945	1,944	2,889	2,984	3,057	3,180	3,262	580	875	1,331	1,581	1,800	2,040	2,323	2,508
1971	1,511	1,095	2,606	2,668	2,700	2,700	2,700	740	1,097	1,482	1,875	2,211	2,381	2,609	2,957
1972	1,791	705	2,496	3,358	3,457	3,516	3,525	536	718	1,096	1,383	1,672	1,955	2,144	2,443
1973	2,376	1,515	3,891	2,547	2,638	2,667	2,680	988	1,272	1,637	1,808	1,864	2,015	2,136	2,356
1974	1,613	2,630	4,243	2,596	2,914	3,087	3,173	1,361	1,405	1,584	1,751	2,019	2,314	2,525	2,650
1975	1,899	2,091	3,990	2,762	2,870	2,963	3,078	1,314	1,666	2,342	2,699	3,098	3,790	3,928	4,091
1976	1,497	2,102	3,599	4,308	4,407	4,443	4,530	1,906	2,480	2,646	2,868	3,083	3,197	3,349	3,460
1977	1,887	2,524	4,411	3,534	3,526	3,498	3,477	1,629	1,894	2,276	2,455	2,717	2,933	3,154	3,275
1978	1,805	3,129	4,934	3,449	3,652	3,767	3,941	1,113	1,360	1,701	2,175	2,660	3,166	3,546	3,872
1979[1]	2,257	2,383	4,640	4,155	4,212	4,273	4,304	1,959	2,436	2,966	3,378	3,805	4,091	4,533	4,739
1980[2]				5,008	5,145	5,206	5,387	1,306	1,576						
1981															

[1] Preliminary. [2] Estimated. *Source: Gill and Duffus, Ltd.*

COCOA

World Exports of Cocoa Beans by Principal Producing Countries In Thousands of Metric Tons

Year	Brazil	Costa Rica	Dominican Repub.	Ecuador	Equatorial Guinea	Cameroon	Ghana	Malaysia	Ivory Coast	Papua New Guinea	Nigeria	Sao Tome & Principe	Trinidad & Tobago	Venezuela	Togo	Grand Total
1973	82.8	4.7	23.0	30.0	6.4	84.2	373.8	6.5	143.0	22.6	213.9	11.8	3.4	9.9	17.7	1,089
1974	129.9	4.4	26.4	68.9	9.0	88.9	313.9	9.7	205.3	34.0	197.1	9.8	3.8	11.5	15.9	1,170
1975	176.6	5.4	22.3	37.8	3.0	72.5	322.2	11.8	167.5	30.5	194.7	5.2	4.8	14.4	16.2	1,125
1976	128.8	4.2	24.5	22.2	7.0	68.6	327.6	14.8	191.4	31.3	223.0	5.6	3.0	7.6	11.8	1,115
1977	107.6	5.1	25.6	20.1	5.0	56.8	249.1	13.6	158.5	29.4	167.5	6.1	3.2	7.4	19.6	919
1978	134.1	5.8	27.6	16.2	5.0	61.6	207.0	17.6	245.0	28.0	185.9	6.1	3.2	6.4	17.2	1,011
1979[1]	156.9	5.2	26.0	13.2	5.0	61.1	200.0	24.2	195.0	27.5	113.0	8.2	2.6	6.8	11.7	904
1980																

[1] Preliminary. *Source: Foreign Agricultural Service, U.S.D.A.*

Cumulative Ghana Main Cocoa Crop Purchases In Thousands of Metric[1] Tons

Crop Year	Sept. Mid.	Sept. End	Oct. Mid.	Oct. End	Nov. Mid.	Nov. End	Dec. Mid.	Dec. End	Jan. Mid.	Jan. End	Feb. Mid.	Feb. End	March Mid.	March End	Final
1973–4	2.2	5.5	18.7	52.2	92.9	133.4	173.2	215.5	280.7	309.4	328.7	334.5	336.1	336.9	337.3
1974–5	—	—	27.0	76.1	119.1	169.8	231.3	295.5	320.8	338.6	351.8	358.3	360.6	361.2	369.4
1975–6	—	—	53.8	105.6	165.9	220.3	265.3	317.7	344.3	360.9	374.3	380.7	382.9	384.0	388.5
1976–7	—	—	39.4	82.1	123.8	165.9	217.7	245.8	266.5	282.5	299.3	301.5	304.6	304.9	304.9
1977–8[1]	—	—	—1 to 11—		20.6	35.3	60.5	120.0	151.1	178.6	247.7	257.7	260.9	262.0	263.2
1978–9	—	—	36.0	61.3	99.5	144.5	179.3	199.8	227.9	238.0	243.1	245.2	246.0	246.6	249.0
1979–0	—	—	3.7	14.9	31.9	66.4	117.4	172.5	228.9	233.6	266.4	274.0	277.3	279.0	281.7
1980–1	—	—	13.0	24.0		88.6	115.0	151.2	205.5	216.2	235.7	246.2	251.2	253.2	
1981–2															

[1] Data prior to 1977–78 are in THOUSANDS OF LONG TONS. *Source: Unofficial Private Estimates; Ghana Marketing Board*

Confectionery Sales by Manufacturers in the United States In Millions of Dollars

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1973	184	172	182	154	143	135	114	183	233	227	234	180	2,141
1974	211	220	241	200	193	180	172	251	309	309	265	220	2,771
1975	246	250	221	207	202	183	168	245	300	316	251	241	2,830
1976	259	270	277	238	196	192	157	234	307	267	282	233	2,912
1977[1]	223	270	280	211	202	197	142	298	343	289	279	275	3,059
1978[1]	252	291	271	207	211	193	174	314	306	312	310	312	3,847
1979[1]	258	359	332	313	285	258	240	403	435	461	438	382	4,347
1980[1]	414	469	415	340	325	318	293	396	578	581	508	488	5,125
1981													

Compiled by the Department of Commerce from reports of over 200 manufacturers. The number reporting vary from month to month. Represents app. 70% of sales by all manufacturers of candy and competitive chocolate products. [1] Preliminary.
Source: Dept. of Commerce

United States Imports of Cocoa (Includes Shells) In Thousands of Long Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1975	20.5	17.3	21.7	17.9	17.4	18.7	16.6	12.5	17.4	21.5	18.6	33.0	233.0
1976	33.9	16.4	28.8	22.4	21.4	19.5	16.3	20.9	19.6	8.2	11.6	16.5	235.4
1977[1]	30.6	21.5	19.0	16.1	25.1	13.6	10.9	10.8	6.2	8.1	4.7	5.5	172.1
1978[1]	19.4	20.3	27.9	20.5	16.5	12.4	16.1	14.7	7.3	35.6	18.6	20.2	209.7
1979[1]	27.3	26.7	14.6	12.8	8.8	13.7	11.8	15.7	5.7	10.1	10.0	8.0	165.2
1980[1]	11.1	9.2	8.0	19.5	15.4	12.0	16.9	9.6	8.2	9.6	9.4	19.9	148.5
1981[1]	13.5												

[1] Preliminary. *Source: Department of Commerce*

Month End Open Interest of Cocoa Futures at New York In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	10,427	9,210	7,530	6,609	6,807	6,045	6,516	5,557	7,039	7,732	7,691	8,064
1979	7,782	6,506	6,587	6,135	7,392	6,833	6,792	6,415	6,262	7,562	7,050	6,840
1980	8,314	7,723	6,744	6,639	8,114	6,682	8,900	9,529	13,548	14,282	13,210	11,978
1981	14,269	14,064	16,209	13,721								
1982												

Source: N.Y. Coffee, Sugar & Cocoa Exch., Inc.

Volume of Trading of Cocoa Futures at New York In Contracts

Year	Jan.	Feb.	Mar	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	20,694	22,017	21,095	19,670	14,886	18,376	13,459	18,686	18,509	18,717	18,565	18,594	
1979	19,447	17,626	16,430	14,784	21,063	23,282	18160	21,125	16,929	25,555	22,321	15,099	
1980	23,600	40,410	25,066	23,897	26,170	29,673	34,158	27,265	45,437	43,945	39,770	28,954	
1981	32,916	43,352	37,056	52,875									
1982													

Source: N.Y. Coffee, Sugar & Cocoa Exch., Inc.

Spot Cocoa Bean Prices (ACCRA) in New York In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1975	89.5	88.8	84.8	75.5	59.5	62.5	73.0	78.0	77.5	77.5	68.5	76.0	75.9
1976	73.5	75.5	74.0	88.3	93.5	107.5	103.5	114.5	131.3	132.5	161.5	154.3	109.2
1977	173.0	190.3	207.5	198.3	199.3	199.3	199.3	199.3	256.0	250.0	250.0	250.0	214.4
1978	165.0	140.0	178.0	179.0	170.0	155.0	161.0	175.0	189.0	183.0	199.0	196.0	174.2
1979	193.0	177.0	176.0	157.5	165.0	172.0	158.0	157.0	166.0	159.0	154.5	155.0	160.4
1980	163.8	173.5	157.0	147.0	135.0	125.3	134.5	120.0	122.0	119.0	120.0	108.0	135.4
1981	109.0	110.0											

Source: Bureau of Labor Statistics (0191-0221)

Visible Stock of Cocoa in New York Warehouses[1], at End of Month In Thousands of Bags

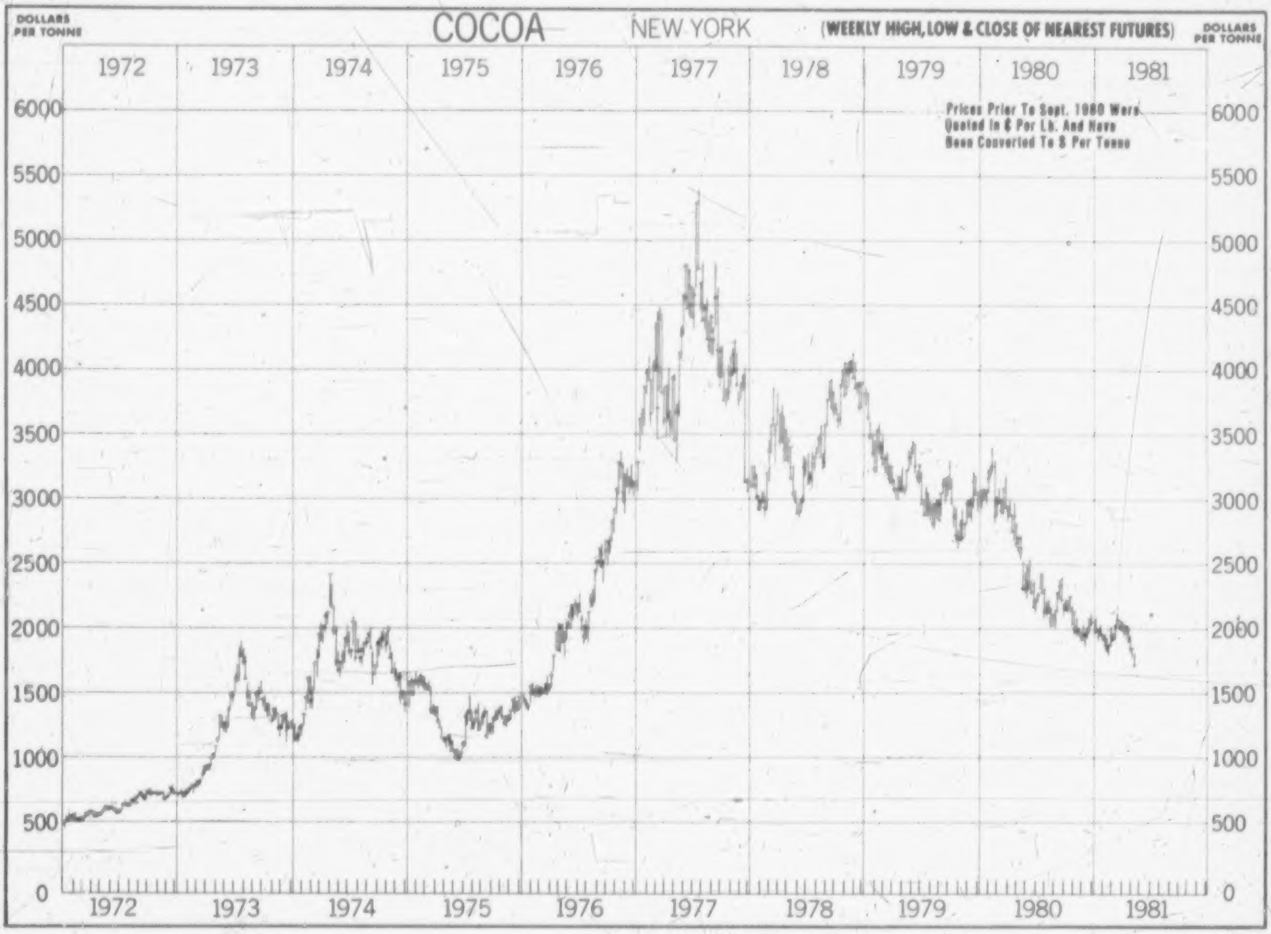
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1975	9.5	9.7	6.0	7.0	23.9	21.9	11.5	3.5	.5	.1	.1	.1
1976	.1	.1	.1	.1	3.0	.7	.7	.7	.7	.7	—	2.6
1977	1.7	1.3	1.9	.9	.9	14.6	47.3	44.6	13.4	5.6	4.9	8.8
1978	5.0	9.3	24.2	19.4	24.2	29.1	38.0	17.9	12.2	16.0	19.8	28.2
1979	35.2	33.6	31.1	31.4	40.2	44.2	125.5	127.5	104.7	101.7	90.0	87.3
1980	85.3	68.2	18.0	29.4	42.8	86.1	96.0	84.5	66.5	52.7	50.7	22.7
1981	37.5	14.9	29.3	66.5								

[1] In licensed & unlicensed warehouses of storage companies licensed by the N.Y. Coffee, Sugar & Cocoa Exch. *Source: N.Y. Coffee, Sugar & Cocoa Exch.*

Visible Stock of Cocoa in Philadelphia Warehouses, at End of Month In Thousands of Bags

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1975	22.6	19.1	16.2	23.8	42.2	26.0	24.5	15.7	16.4	9.5	13.7	20.1
1976	27.4	32.1	36.4	54.3	63.1	70.0	82.9	77.7	68.6	72.3	57.6	47.8
1977	47.8	62.2	61.2	25.5	22.5	23.4	18.2	16.3	10.6	4.1	.3	.2
1978	.2	.6	6.0	14.0	.5	.8	.8	.7	14.3	12.0	23.8	50.6
1979	60.4	77.7	107.7	114.4	110.6	101.7	100.2	124.1	132.5	106.3	81.3	86.3
1980	64.6	52.5	40.0	33.4	46.4	45.9	38.8	48.9	40.6	16.2	8.3	33.6
1981	38.1	15.5	15.4	45.7								

Source: N.Y. Coffee, Sugar & Cocoa Exch.



High, Low & Closing Prices of March Cocoa Futures at New York In Dollars per Tonne[1]

Year of Delivery		Year Prior to Delivery											Delivery Year			Life of Delivery
		Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Range
1978[1]	High	156.35	175.00	157.90	167.80	182.25	195.25	185.50	175.00	168.00	166.00	155.30	147.75	149.55	175.00	195.25
	Low	136.60	137.25	133.75	133.25	153.25	164.30	154.00	157.25	147.70	145.00	138.20	132.05	130.00	142.50	90.85
	Close	156.35	140.25	154.25	159.25	170.50	179.50	163.75	161.05	153.25	148.20	142.35	133.90	145.05	159.45	—
1979[1]	High	124.75	152.00	148.20	140.25	137.00	145.10	157.20	173.00	184.00	189.25	183.90	175.50	163.00	153.25	189.25
	Low	111.50	121.70	132.50	122.60	120.40	129.50	141.60	156.65	161.25	171.20	167.10	149.25	144.95	141.75	111.50
	Close	123.80	146.00	133.35	123.10	136.50	144.70	156.35	167.10	177.15	181.20	176.75	149.25	154.15	141.85	—
1980[1]	High	168.75	162.00	153.85	159.50	163.40	159.60	145.10	146.75	149.90	142.10	145.40	146.85	154.25	140.00	174.50
	Low	154.70	153.50	147.65	149.10	153.20	140.15	135.25	136.90	122.00	124.00	134.00	131.50	127.90	130.75	122.00
	Close	163.60	154.25	151.50	157.15	160.75	144.80	136.20	144.10	126.20	140.95	134.00	144.10	134.95	134.50	—
1981	High	3350	3245	3011	2830	2650	2562	2350	2454	2305	2217	2105	2084	2017	2075	3350
	Low	3085	2940	2785	2422	2385	2260	2210	2195	2121	1960	1905	1922	1795	1915	1795
	Close	3110	2960	2792	2425	2393	2275	2226	2220	2226	1965	2050	1944	1947	2025	—
1982	High	2260	2300	2250												
	Low	2170	2190	2081												
	Close	2224	2210	2130												

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[1] Prices prior to the 1981 delivery are in cents per pound. To convert to $ per tonne, multiply the ¢ per lb. by 2204.6. *Source: N.Y. Coffee, Sugar & Cocoa Exch., Inc.*

Coconut Oil and Copra

Early in 1981, the USDA estimated 1980/81 world coconut oil production at 3.2 million tonnes, up from the estimated 3.0 million produced in 1979/80. The USDA's Foreign Agricultural Service also projected 1980/81 world production of copra at 5.05 million tonnes, almost 7½ percent above the 1979/80 production. The potential production of 5.05 million tonnes in 1980/81 would represent the highest production in the past 5 seasons.

During 1980, the usual large Philippine exports of coconut (and copra) oil were supplemented in world markets by Indonesian exports. Indonesia re-emerged as a major exporter following successful implementation of a national policy encouraging domestic substitution of palm oil for coconut oil to allow for the more profitable exportation of the coconut oil. On the importing side, the key change in 1980 was the almost double (over the previous year's) quantity of coconut oil imported by the U.S.S.R.

United States coconut oil imports in calendar year 1980 were projected by the USDA at 390 thousand tonnes, a 12 percent decrease from the 444 thousand imported in 1979, and a 16% decrease from the 464 thousand tonnes imported in 1978. According to the USDA, world supplies in 1980 of most vegetable oils, including coconut oil, were adequate for demand.

The effect on world coconut oil markets of projected declining EEC imports and of increased Philippine supplies could be somewhat offset in 1981 by United States imports, projected by the USDA at 450 thousand tonnes, and by U.S.S.R. imports projected to double again, to nearly 200 thousand tonnes.

World Copra Exports by Principal Countries In Thousands of Metric Tons

Year	Sri Lanka (Ceylon)	Western Samoa	Indonesia	Papua New Guinea	Mozambique	Philippines	Malaysia (Net Exports)	New Hebrides	Africa	Solomon Islands	World Total		
											(Regis.)	(Unregist.)	(Registered & Unregist.)
1968	21	13	217	—	—	664	15	34	77	17	1,206	43	1,249
1969	19	15	158	—	—	576	25	37	76	24	1,079	28	1,107
1970	16	12	185	86	45	420	19	31	70	21	900	39	923
1971	17	18	64	92	47	710	15	34	64	27	1,079	39	1,106
1972	44	19	42	88	44	991	16	30	58	21	1,362	28	1,368
1973	3	14	36	80	48	728	12	22	67	15	1,015	7	1,009
1974	0	15	0	74	42	309	8	36	57	22	580	7	561
1975	1	20	33	95	31	827	8	27	38	28	1,123	12	1,148
1976	1	12	4	93	41	835	19	34	49	23	1,108	19	1,124
1977	0	18	0	78	36	543	12	44	46	27	807	24	831
1978	1	14	0	92	17	380	13	45	29	26	638	20	659
1979[1]	1	19	0	91	20	145	15	51	31	34	428	20	435
1980[1]	0	25	35	80	20	130		50		40			460
1981													

[1] Preliminary. *Source: Foreign Agricultural Service, U.S.D.A.*

World Coconut Oil Exports by Principal Countries In Thousands of Metric Tons

Year	Sri Lanka (Ceylon)	Singapore[2]	Indonesia	Malaysia[2]	Philippines Registered	Sarawak[2]	Total Asia	Mozambique	EC-9	Fiji	Papua New Guinea	Total Oceania	World Total
1968	64	39	18	38	270	4	434	8	—	17	23	47	491
1969	56	22	4	27	213	4	326	8	—	17	21	49	387
1970	58	24	3	43	337	4	467	7	50	17	22	51	586
1971	71	9	4	37	409	4	533	7	76	15	27	52	677
1972	87	15	34	21	467	2	626	6	136	18	26	53	830
1973	18	5	17	25	426	4	494	10	108	14	28	58	679
1974	22	4	0	44	432	—	502	9	72	16	27	49	643
1975	41	11	24	35	593	—	732	4	211	14	27	61	986
1976	61	10	13	34	822			9	260	18	28	59	1,270
1977	9	11	0	25	789			5	156	18	26	57	1,057
1978	30	17	0	40	990			5	113	18	29	70	1,274
1979[1]	31	21	21	56	795			4	56	15	34	75	1,167
1980[1]	5		45		900				50	20	30		1,200
1981													

[1] Preliminary. [2] Net Exports. *Sourte: Foreign Agricultural Service, U.S.D.A.*

COCONUT OIL AND COPRA

Supply & Distribution of Coconut Oil in the United States In Millions of Pounds

Year Begin. Oct. 1	Coconut Oil					Domestic Disappearance		Production of Coconut Oil (Refined)				
	Production From Copra	Im-ports[2]	Stocks Dec. 31[3]	Total Sup-ply	Exports & Ship-ments	Total	Per Capita	Total	Jan.–March	April–June	July–Sept.	Oct.–Dec.
1968–9	376	438	95	909	9	793	3.92	551.7	148.6	138.5	137.4	127.2
1969–0	297	561	108	967	9	855	4.18	547.5	136.9	139.8	137.6	133.2
1970	61	595	206	1,048	12	644	3.11	544.0	131.5	141.3	138.1	133.1
1971	—	628	203	1,101	22	612	2.93	553.3	143.5	143.9	124.0	142.0
1972	—	677	229	1,201	13	664	3.16	638.6	145.8	160.1	140.0	147.1
1973	—	720	106	1,108	25	539	2.55	649.4	176.9	183.4	147.6	141.5
1974	—	673	122	795	14	675	3.16	540.1	133.7	118.0	133.4	155.0
1975	—	1,248	107	1,355	53	1,175	5.46	716.2	146.2	169.6	186.8	213.6
1976	—	1,115	127	1,243	31	1,075	4.96	849.2	214.2	223.7	216.1	195.2
1977	—	980	137	1,117	33	939	4.30	729.4	184.5	196.7	175.6	172.6
1978–9[1]	—	967	145	1,112	10	945		768.3	187.9	207.5	196.6	176.2
1979–0[1]	—	850	157	1,007	10	850		595.6	183.9	137.4	143.8	129.7
1980–1								651.6	146.1	153.4	156.0	196.1

[1] Preliminary. [2] Imports for consumption. [3] Includes G.S.A. stockpile & in U.S. bond.
Sources: Bureau of the Census; Agricultural Marketing Service

Utilization of Coconut Oil in the United States In Millions of Pounds

Year	Food Uses					Nonfood Uses					
	Short-ening	Mar-garine	Salad Oil[3]	Other	Total	Soap	Fatty Acids	Foots & Loss	Drying Oil Pdt's.	Other	Total
1968	41	14	—	322	368	154	64	35	8	172	434
1969	47	15	—	341	401	150	56	33	9	184	432
1970	45	10	1	293	343	164	60	33	6	178	441
1971	56	7	2	393	457	166	60	38	5	148	378
1972	82	6	24	323	411	180	85	44	5	123	414
1973	86	4	8	375	465	181	95	44	5	154	431
1974	61	9	15	252	286	167	82	29	4	155	423
1975[1]	106	20	36	249	442	163	90	34	4	—	430
1976[2]	128	4	74	363	492	194	107	45	5	192	499
1977[2]	78	5	42	323	383	198	116	43	5	116	495
1978[2]	75	7	29			184	128	44			
1979[2]	93	4				190					
1980											

[1] Preliminary. [2] Estimate. [3] or Cooking Oil. *Source: Economic Research Service, U.S.D.A.*

U.S. Consumption of Coconut Oil in End Products In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1968	61.1	56.6	64.7	63.8	67.9	57.8	54.2	61.1	57.2	65.6	61.5	54.1	725.6
1969	59.6	59.9	63.8	63.8	60.5	61.0	52.3	59.4	65.1	67.7	58.3	61.2	732.6
1970	55.1	64.7	63.4	71.1	63.1	66.7	55.6	61.3	62.5	62.1	60.4	63.6	750.2
1971	63.6	60.9	68.9	64.3	63.4	68.4	52.1	53.4	60.8	63.1	62.3	59.2	740.4
1972	57.4	63.0	66.4	69.7	73.0	76.5	65.3	75.1	71.4	69.7	70.9	66.5	842.5
1973	81.8	70.8	81.1	72.3	83.6	80.0	66.5	70.9	77.3	86.1	68.5	62.1	901.0
1974	71.4	62.9	66.2	63.5	55.8	54.1	50.7	51.7	59.6	67.4	66.3	56.4	726.0
1975	67.6	58.2	68.1	70.7	67.7	71.8	61.8	75.2	81.1	87.8	78.5	76.8	865.3
1976	80.3	78.4	88.1	83.3	84.9	90.3	80.2	82.6	80.8	79.2	87.1	75.1	990.3
1977[1]	73.4	69.9	82.6	73.0	73.9	79.1	63.1	71.9	73.1	76.3	77.4	65.0	878.7
1978[1]	69.3	71.0	81.5	88.9	87.6	76.1	73.6	79.0	72.4	84.0	75.4	55.4	914.2
1979[1]	72.7	66.3	83.3	69.1	69.8	62.0	50.4	58.5	58.0	54.4	55.3	48.5	748.4
1980[1]	55.9	49.9	59.5	55.8	58.1	56.3	56.2	51.0	62.5	66.9	63.1	58.3	693.5
1981[1]	67.7	65.8											

[1] Preliminary. *Source: Bureau of the Census*

Imports of Coconut Oil into the United States In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1968	115.8	59.6	20.3	16.9	34.2	35.7	40.5	16.1	30.7	41.0	17.5	14.6	442.8
1969	152.3	40.1	10.3	19.2	34.2	33.0	31.6	28.3	18.4	28.7	21.2	7.2	424.6
1970	146.5	49.3	30.3	18.4	51.7	76.1	47.6	46.9	27.0	63.9	14.0	12.3	584.2
1971	129.2	41.7	52.9	54.9	47.5	45.5	35.3	30.2	79.3	67.8	28.2	16.1	628.6
1972	22.0	144.6	67.9	27.3	70.4	58.2	53.1	47.0	31.7	67.0	37.3	50.4	677.0
1973	69.8	112.5	70.9	36.7	62.4	43.7	41.9	64.1	29.8	46.7	64.8	74.6	718.0
1974	24.3	25.3	45.0	48.2	35.3	26.5	93.2	24.7	55.0	78.4	44.8	41.7	542.3
1975	47.0	40.5	70.0	53.4	90.8	27.6	38.2	64.6	76.3	101.6	178.5	80.4	869.1
1976	100.7	144.0	64.5	93.2	95.1	66.7	102.1	110.4	111.3	98.0	77.9	144.1	1,208
1977	86.8	128.8	99.2	64.9	89.4	108.8	66.3	75.0	76.1	29.4	75.1	94.5	994.3
1978	65.5	127.1	102.9	72.4	98.3	79.9	104.5	83.7	47.0	80.4	100.7	60.1	1,023
1979[1]	167.2	83.7	87.7	55.6	52.6	70.3	44.5	86.4	77.4	86.6	92.1	75.7	979.8
1980[1]	75.1	50.1	42.7	102.8	39.3	62.8	58.7	67.7	56.5	126.7	90.9	116.0	889.3
1981[1]	110.1												

[1] Preliminary. *Source: Department of Commerce*

Stocks of Coconut Oil (Crude & Refined) in the United States In Millions of Pounds

Year	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1970	59.4	200.4	139.5	138.3	122.1	122.9	134.0	114.0	91.8	102.2	109.9	105.1
1971	100.8	161.8	134.4	139.5	132.7	134.2	136.8	147.4	124.8	108.2	115.8	110.2
1972	103.9	163.1	154.8	158.9	142.1	170.2	168.5	157.8	121.5	111.1	136.2	111.1
1973	116.5	208.2	220.3	201.1	173.1	174.1	159.1	140.9	140.4	114.3	79.0	102.7
1974	105.9	100.1	87.3	105.8	92.9	85.7	77.8	90.5	107.5	121.7	113.6	105.8
1975	118.1	112.8	100.9	104.9	97.6	98.9	80.7	94.3	90.7	106.9	120.5	131.7
1976	114.1	140.6	135.4	113.6	114.1	125.3	125.6	127.3	150.3	127.4	142.4	137.9
1977	123.0	163.9	152.0	156.3	170.7	162.7	150.5	160.5	178.8	136.7	128.6	114.6
1978	133.7	146.5	176.7	173.6	166.8	140.2	146.0	132.6	130.6	144.8	115.6	112.6
1979[1]	147.2	198.4	195.7	177.2	138.6	148.3	112.5	129.9	131.6	157.0	211.5	198.4
1980[1]	217.4	222.8	177.0	164.1	163.0	154.6	132.5	152.1	176.1	152.9	190.0	210.8
1981[1]	234.6	251.6	296.7									

[1] Preliminary. *Source: Bureau of Census*

Average Price of Coconut Oil (Crude)[1] at the Pacific Coast (United States) In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1968	18.6	20.3	21.3	22.0	22.8	17.7	15.8	17.2	14.4	13.8	14.2	14.6	17.7
1969	13.4	12.9	12.9	12.9	12.9	12.9	13.4	13.2	13.6	14.0	14.9	16.4	13.6
1970	16.4	16.2	16.4	16.7	16.4	16.3	16.2	15.9	16.5	16.2	16.3	15.9	16.3
1971	15.8	14.5	13.8	13.3	13.1	13.8	14.2	14.3	14.1	13.2	12.1	11.3	13.6
1972	10.6	9.9	10.0	10.7	10.1	9.7	9.4	9.3	9.2	9.4	9.2	9.6	9.8
1973	9.9	13.1	14.5	16.9	20.0	20.8	25.9	26.6	27.8	30.0	32.6	43.1	23.4
1974	49.1	53.5	60.5	60.3	60.0	61.6	60.5	51.7	42.5	42.6	35.3	31.4	50.7
1975	26.3	22.6	22.1	21.8	18.9	17.2	20.1	21.5	19.8	18.0	16.1	16.2	20.0
1976	16.1	16.1	17.0	17.1	17.2	18.9	22.3	21.6	23.8	23.0	23.8	26.3	20.3
1977	25.6	27.4	34.7	37.3	34.3	29.9	24.8	21.8	22.9	23.9	24.9	26.4	27.8
1978	26.4	27.1	31.9	30.5	29.9	32.4	32.9	32.3	39.2	41.6	42.6	42.6	34.1
1979	46.3	47.2	47.0	49.9	53.2	57.3	57.3	53.7	44.8	42.5	42.4	40.2	48.5
1980	40.8	40.6	37.5	34.1	29.3	29.5	30.4	29.9	29.1	27.9	29.4	27.8	32.1
1981													

[1] Tank cars, f.o.b. mill. Includes 1¢ import duty. *Source: Bureau of Labor Statistics*

Coffee

Preliminary USDA data indicate that U.S. per capita consumption of coffee in 1980 was about 10.5 pounds, green bean equivalent, 1.0 pound less than the 11.5 pounds consumed in 1979. Per capita consumption appeared to have resumed the decline begun in 1962, when it was nearly 16 pounds.

According to the Bureau of Labor Statistics, the wholesale price of a 1-pound can of roasted coffee averaged $2.89 in 1980, up from $2.74 in 1979. The average wholesale price of a 6-oz. jar of instant coffee increased to $2.99 in 1980 from $2.83 in 1979.

U.S. Coffee Trade

U.S. imports of green coffee in calendar 1980 were 18.2 million bags (132.276 lbs. each) down 6.2 percent from 1979 imports of 19.4 million bags. Soluble coffee imports (green equivalent) totaled about 1.2 million bags and roasted coffee imports amounted to about 353,000 bags, decreases of 18 percent and 31 percent, respectively, from 1979 imports.

Green coffee roastings in the U.S. during 1980 were 17.0 million bags, about the same as in 1979. Inventories of green coffee in the U.S. on December 31, 1980 were estimated at 2.8 million bags by the Bureau of the Census, up 11.6 percent from the 2.5 million bags on hand at the end of December 1979.

World Coffee

The fourth USDA estimate of the 1980/81 world coffee crop (issued in April 1981) was 80.7 million bags (60-kilograms, or 132.276 lbs., each). This estimate was 700,000 bags below the revised estimate of 81.4 million bags for 1979/80 world coffee production. Exportable production, which is the harvested production less domestic consumption in producing countries, was estimated at 60.5 million bags, 1.8 percent lower than the 61.6 million bags for 1979/80.

Brazil's 1980/81 (July–June) coffee harvest totaled 21.5 million bags. Exports during 1980/81 were expected to total 16.5 million bags, including 14.0 million in the green form and the equivalent of 2.5 million in soluble form. Brazil's domestic consumption during the 1980/81 marketing year was estimated at 8.0 million bags. Coffee stocks on June 30, 1981 (before the 1981 crop stocks are counted) were expected to fall below 5.5 million bags—a critically low reserve. Brazil's 1981/82 crop was estimated by the USDA at between 31 and 33 million bags, 50 percent above the 1980/81 harvest. According to the president of the Brazilian Coffee Institute, there are about 3.3 billion coffee trees in Brazil at present, 77 percent are productive, and 50 percent are located outside the country's frost belt. According to the USDA, should trees suffer frost damage during June–August 1981, the 1982 Brazilian crop would be reduced in proportion to the severity of the damage.

International Coffee Organization

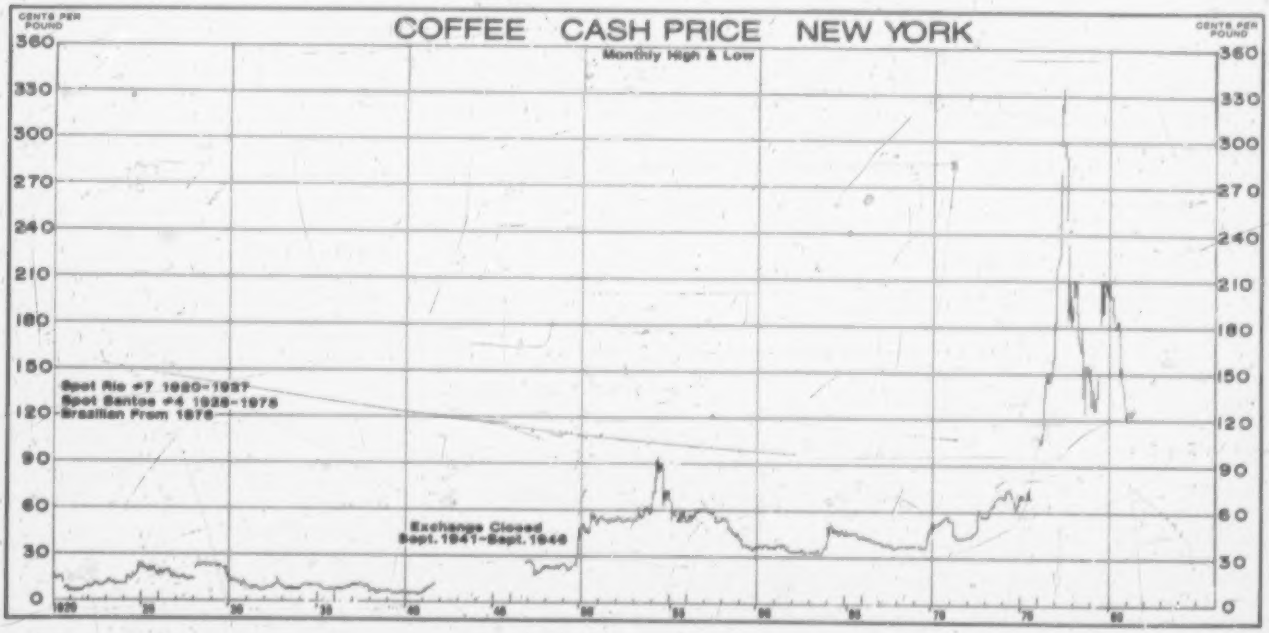
The Bogota Group of coffee producers, during a September 16–October 3 meeting of the ICO, agreed to phase out the activities of Pancafe, its trading arm.

President Reagan signed Executive Order No. 1297 on March 12, 1981, which enabled the Commissioner of Customs to enforce the quota system and limit U.S. coffee imports from non-members.

Adjustments in quota allocations for ICO exporting members are based on the level of the 20-day moving average for the composite indicator price. Because this price fell to U.S. $1.20, quotas for most of the larger exporters were cut 1.4 million bags on November 19, 1980. Since the indicator price remained below U.S. $1.20 for more than 20 consecutive market days, the global quota was cut by a further 1.4 million bags on December 17, 1980.

Futures Markets

Arabica coffee futures are traded on the Coffee, Sugar & Cocoa Exchange, Inc. in New York, and Robusta futures are traded in London.



World Green Coffee (Total) Production In Thousands of 60 Kilo Bags (132.276 Lbs. Per Bag)

Crop Year	Angola	Brazil	Cameroon	Colombia	Costa Rica	Ethiopia	Guatemala	India	Indonesia	Ivory Coast	Mexico	Salvador	Uganda	Zaire (Congo, K)	World Total
1973–4	3,200	14,500	1,260	7,800	1,570	1,700	2,200	1,535	2,750	3,285	3,300	2,378	3,100	1,317	62,459
1974–5	3,444	27,500	1,816	9,000	1,390	2,488	2,540	1,630	2,675	4,500	3,900	3,300	3,331	1,150	81,691
1975–6	1,180	23,000	1,482	8,500	1,276	2,677	2,043	1,498	3,049	5,266	3,856	2,530	2,214	1,072	73,008
1976–7	1,131	9,300	1,307	9,300	1,331	2,782	2,213	1,753	3,219	4,867	3,330	2,973	2,664	1,437	61,439
1977–8	1,247	17,500	1,371	11,050	1,449	3,143	2,541	2,124	3,611	3,393	3,401	2,400	1,868	1,129	70,757
1978–9	613	20,000	1,627	12,600	1,749	3,142	2,827	1,842	4,788	4,601	4,141	3,186	1,615	1,300	78,434
1979–0	370	22,000	1,560	12,300	1,507	2,963	2,647	2,500	5,003	4,116	3,610	2,730	2,100	1,400	80,400
1980–1[1]	350	21,500	1,650	12,400	1,880	3,100	2,600	2,333	5,275	4,166	3,700	2,400	2,300	1,400	80,217

[1] Preliminary. *Source: Foreign Agricultural Service, U.S.D.A.*

World Green Coffee (Exportable)[3] Production In Thousands of 60 Kilo Bags

Crop[2] Year	Angola	Brazil	Cameroon	Colombia	Costa Rica	Ethiopia	Guatemala	Indonesia	Ivory Coast	Kenya	Mexico	Salvador	Uganda	Zaire (Congo, K)	World Total
1971–2	3,300	14,850	1,220	5,750	1,190	1,490	1,845	1,320	4,400	973	1,835	2,440	2,830	1,200	53,083
1972–3	3,400	15,000	1,533	7,430	1,160	1,410	1,990	1,650	4,985	1,240	2,100	1,935	3,280	1,265	57,285
1973–4	3,095	6,370	1,213	6,250	1,400	1,005	1,925	1,795	3,219	1,073	1,690	2,203	3,078	1,184	43,674
1974–5	3,352	19,500	1,766	7,400	1,237	1,051	2,255	1,700	4,432	1,082	2,156	3,130	3,302	1,017	62,862
1975–6	1,100	15,000	1,455	7,100	1,104	1,011	1,753	2,033	5,107	1,224	2,456	2,350	2,192	922	54,307
1976–7	267	1,800	1,281	7,900	1,147	1,049	1,915	2,219	4,782	1,644	2,080	2,788	2,634	1,270	42,777
1977–8	1,172	10,000	1,344	9,500	1,264	1,354	2,236	2,586	3,357	1,367	2,001	2,210	1,838	954	52,016
1978–9	533	12,000	1,599	10,970	1,533	1,342	2,517	3,735	4,551	1,181	3,034	2,991	1,585	1,120	59,288
1979–0	290	14,000	1,530	10,550	1,297	1,130	2,332	3,823	4,056	1,376	2,320	2,530	2,070	1,210	60,644
1980–1[1]	265	13,500	1,618	10,575	1,660	1,250	2,275	4,175	4,101	1,191	2,300	2,200	2,270	1,205	60,003

[1] Preliminary. [2] Coffee marketing year begins in July in some countries & in others about Oct. [3] Exportable production represents total harvested production minus estimated domestic consumption. *Source: Foreign Agricultural Service, U.S.D.A.*

U.S. Coffee[1] Roastings & Inventories In Thousands of 60 Kilo Bags

Year	Roastings (Green Weight)—By Quarters 1st	2nd	3rd	4th	Total	Inventories Mar. 31	June 30	Sept. 30	Dec. 31
1969	5,370	5,080	4,780	5,621	20,851	3,249	3,389	3,361	3,811
1970	5,390	5,143	4,352	5,190	19,960	3,334	3,487	3,461	2,593
1971	5,164	4,663	4,481	5,299	19,607	2,537	3,027	5,198	4,000
1972	5,316	4,972	4,660	5,127	20,075	4,254	3,506	3,852	3,663
1973	5,203	4,784	4,275	5,153	19,415	3,920	4,325	4,582	4,146
1974	5,103	4,629	3,840	4,997	18,569	4,940	5,108	4,072	2,770
1975	4,713	4,469	4,743	4,626	18,551	2,468	2,523	3,467	3,300
1976	5,612	4,977	3,853	4,621	19,063	3,194	2,908	2,961	2,805
1977[2]	4,752	3,239	2,364	3,878	14,233	3,519	3,115	2,638	1,684
1978[2]	4,467	3,554	3,781	4,497	16,299	2,161	2,202	2,131	2,347
1979[2]	4,681	4,303	3,755	4,266	17,005	2,345	2,405	2,724	2,521
1980[2]	4,297	4,023	3,859	4,865	17,044	2,918	2,907	2,956	2,814

[1] Green coffee, excluding stocks & roastings by Military Services. [2] Preliminary. *Source: Bureau of the Census*

Average Spot Price of Coffee (Santos No. 4) in N.Y. In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1970	54.8	54.8	54.3	53.8	53.8	53.8	56.8	57.0	57.8	58.8	57.5	55.0	55.7
1971	55.0	55.0	48.0	45.0	43.8	43.8	43.0	43.3	43.3	43.3	44.0	44.0	46.1
1972	N.A.	N.A.	N.A.	46.3	48.0	48.5	N.A.	62.5	59.0	58.0	56.0	57.0	54.4
1973	57.0	62.0	65.5	65.0	65.0	67.0	70.0	70.0	72.5	72.3	73.0	72.0	67.6
1974	72.0	71.0	75.0	75.5	76.5	74.0	72.0	63.0	60.0	64.0	69.0	70.0	70.2
1975	67.5	68.0						No Quotations					67.8
1976		No Quote			93.5		No Quote		152.0		No Quote		122.8
1977							No Quote						
1978				No Quote				135.0	154.0	154.0	153.0	146.0	148.4
1979	146.0	127.0	136.0	138.0	148.0	180.0	209.0	201.0	206.0	208.0	205.0	212.0	176.3
1980	189.0	213.0	205.0	208.0	218.0	211.0	195.0	206.0	206.0	210.0	210.0	208.0	206.6
1981	218.0	218.0											

Source: Bureau of Labor Statistics (0191-0101.01)

COFFEE

Total Coffee Imports (for Consumption) into the U.S. In Thousands of 60 Kilo Bags

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1970	[illegible]	1,841	1,716	1,639	1,644	1,891	1,550	1,616	1,355	1,713	1,597	1,382	19,727
1971	[illegible]	1,530	1,480	2,032	1,759	1,941	2,132	2,720	2,754	621	875	1,818	21,669
1972	2,547	2,172	1,137	1,146	1,784	1,452	1,434	1,947	2,149	2,057	1,643	1,288	20,757
1973	1,996	1,844	2,101	2,050	2,494	1,710	1,573	1,731	1,399	1,624	1,624	1,652	21,799
1974	2,182	2,022	2,457	2,264	1,873	1,529	1,499	1,152	821	740	1,159	1,550	19,248
1975	1,852	1,656	1,535	1,448	1,365	1,736	1,626	1,868	2,533	1,784	1,587	1,299	20,289
1976	1,664	1,744	2,311	1,636	1,546	1,864	1,909	1,637	956	1,013	1,649	1,858	19,788
1977	1,994	1,707	1,839	1,824	1,224	1,137	756	695	678	635	972	1,347	14,808
1978	1,682	1,575	1,707	1,557	1,345	1,249	1,316	1,124	1,337	1,901	1,689	1,651	18,133
1979	1,747	1,353	1,631	2,037	1,619	1,617	1,597	1,404	1,632	1,273	1,593	1,893	19,396
1980	2,020	1,366	1,421	1,642	1,566	1,663	1,533	1,386	1,062	1,292	1,386	1,715	18,153
1981	1,858												

Source: U.S. Dept. of Commerce

Total Coffee Imports (for Consumption) into the U.S. In Thousands of 60 Kilo Bags

Year	Ethiopia	Brazil	Colombia	Costa Rica	Domin. Repub.	Ecuador	Guatemala	Indonesia	Mexico	Ivory Coast	Angola	Salvador	Venezuela	Grand Total
1970	1,071	4,717	2,497	375	352	600	716		982		1,385	539	253	19,732
1971	1,130	6,536	2,642	350	338	404	813		1,286		1,590	645	246	22,686
1972	965	6,152	2,711	294	401	490	689	744	1,070	977	1,297	391	243	20,769
1973	1,062	4,596	2,868	284	507	435	1,110	626	1,641	1,150	1,693	1,047	174	21,789
1974	505	2,725	3,090	268	381	512	1,096	942	1,324	749	2,396	1,111	246	19,245
1975	533	3,748	3,400	192	336	694	874	765	1,662	966	1,202	1,018	182	20,289
1976	703	3,092	2,688	179	551	767	749	1,082	1,869	1,330	871	1,045	288	19,788
1977	288	2,453	1,951	272	585	505	832	860	1,406	673	49	1,037	155	14,808
1978	461	2,694	2,808	334	461	1,044	942	1,177	1,390	775	304	627	239	18,133
1979	549	1,890	3,891	516	548	638	1,123	1,294	1,934	834	40	1,123	121	19,396
1980[1]	406	3,505	3,404	298	343	539	1,374	1,315	1,337	438	120	1,374	35	18,153
1981														

[1] Preliminary. *Source: U.S. Department of Commerce*

Volume of Trading of Coffee "C" Futures at New York In Contracts

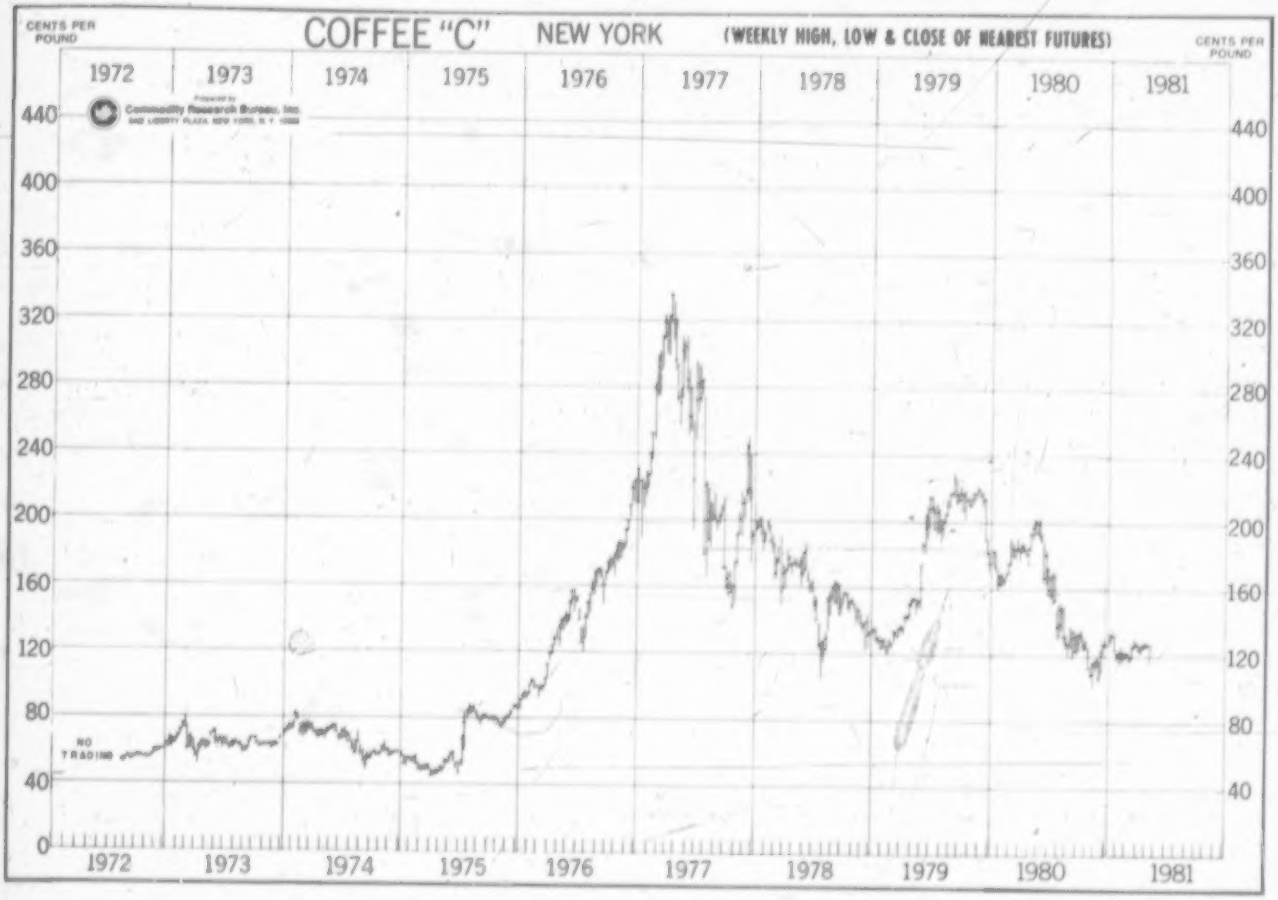
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	11,125	10,341	17,202	12,049	12,194	11,112	11,346	18,526	13,526	14,615	14,589	17,334	163,959
1979	21,463	25,243	24,205	36,298	35,885	39,137	43,944	43,046	40,088	50,054	51,949	38,488	449,799
1980	70,277	77,143	112,558	93,108	145,830	87,149	80,217	66,054	69,731	37,528	35,310	32,029	906,944
1981	38,671	34,086	44,963	29,766									
1982													

Source: N.Y. Coffee, Sugar & Cocoa Exch., Inc.

Month End Open Interest of Coffee Futures at New York In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	4,413	4,191	3,942	3,661	3,733	2,952	3,152	3,926	4,004	4,767	5,951	6,581
1979	7,113	7,965	8,799	9,751	10,279	8,761	10,214	12,014	12,479	14,808	15,974	15,988
1980	13,077	13,113	12,990	11,288	16,975	15,854	13,576	10,767	11,824	11,155	9,489	8,848
1981	8,218	8,624	9,931	10,043								
1982												

Source: N.Y. Coffee, Sugar & Cocoa Exch., Inc.



High, Low & Closing Prices of May Coffee Futures in New York In Cents per Pound

Year of Delivery		Year Prior to Delivery										Delivery Year					Life of Delivery Range
		Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	
1978	High	—	314.50	294.13	255.25	201.50	185.00	171.25	150.00	161.00	175.80	190.40	179.00	173.50	183.25	179.25	314.50
	Low	—	290.75	255.90	188.00	163.00	159.00	145.50	132.00	135.00	152.00	167.00	158.80	144.50	160.25	172.00	132.00
	Close	—	292.75	261.25	194.07	179.00	164.25	147.50	147.50	158.63	174.43	170.50	159.46	168.65	174.75	179.00	—
1979	High	125.00	120.00	150.25	163.50	121.25	138.50	144.00	144.00	139.95	130.50	134.76	128.45	138.00	152.00	155.10	163.50
	Low	111.75	111.00	114.50	121.50	94.00	102.00	128.00	132.25	126.50	114.75	120.50	119.41	126.60	132.50	145.00	94.00
	Close	118.25	115.20	149.50	124.75	113.50	137.00	132.88	139.25	130.36	130.47	124.92	127.47	137.49	151.25	149.49	—
1980	High	145.00	154.86	155.00	216.49	216.35	197.00	200.00	204.75	198.00	191.50	184.00	183.50	194.75	188.00	199.00	216.49
	Low	126.49	140.50	144.05	157.00	178.29	179.25	190.35	183.50	187.00	175.00	166.91	165.50	180.75	176.50	174.75	116.00
	Close	144.99	153.50	153.00	216.49	183.90	195.09	197.25	189.31	194.08	175.96	171.00	183.26	182.25	176.60	195.25	—
1981	High	190.75	187.50	198.00	198.60	181.40	162.00	157.00	138.00	128.50	130.40	137.00	127.00	131.40	129.25		
	Low	176.25	176.10	177.40	169.00	138.47	135.25	129.75	128.25	114.75	116.00	123.30	115.55	117.65	121.50		
	Close	179.69	178.54	190.60	179.75	146.59	143.78	134.65	128.55	123.25	127.81	127.25	121.00	128.66	126.48		
1982	High	126.25	124.00														
	Low	120.10	117.50														
	Close	122.60	122.25														

Source: N.Y. Coffee, Sugar & Cocoa Exch., Inc.

Coke

World Production of Metallurgical Coke[1], by Specified Countries In Millions of Short Tons

Year	Belgium	Canada	Czechoslovakia	France	W. Germany	United Kingdom	India	Italy	Japan	Netherlands	Poland	China	U.S.S.R.[3]	United States	World Total
1968	8.0	5.3	10.4	13.6	40.0	18.2	8.1	7.0	28.8	3.2	15.9	17.0	78.8	63.7	348.1
1969	8.0	5.0	11.0	15.0	43.0	22.5	9.9	7.3	34.2	2.2	16.3	19.0	81.0	64.8	370.2
1970	7.8	5.7	11.3	15.6	44.0	22.4	9.9	7.8	41.6	2.2	15.3	20.0	83.1	66.5	386.3
1971	7.5	5.1	11.5	13.8	41.4	21.1	9.9	7.7	42.7	2.1	15.6	24.0	86.3	57.4	377.7
1972	8.0	5.2	11.8	12.7	38.0	14.8	10.0	7.8	39.8	2.2	17.5	26.5	87.9	60.5	375.4
1973	8.6	5.9	10.1	13.1	37.5	19.6	9.8	8.5	48.9	2.9	18.7	30.9	89.7	64.3	422.8
1974	8.9	6.0	10.3	12.9	38.5	17.4	9.0	9.4	50.3	3.0	18.7	30.9	91.1	61.6	424.9
1975	6.3	5.8	10.2	12.1	38.4	17.5	7.8	8.9	49.4	3.0	19.0	30.9	92.1	57.2	417.4
1976[2]	8.6	5.8	11.9	12.0	35.2	17.4	9.9	8.8	47.9	3.1	19.8	30.9	93.0	58.3	424.9
1977[3]	6.1	5.4	9.9	11.9	30.3	15.6	11.0	8.9	47.0	2.8	21.0	30.9	94.2	53.5	411.8
1978[3]														49.0	402.0
1979[3]														52.9	375.9
1980[3]														46.1	

[1] Excluding Breeze. [2] Preliminary. [3] Estimate. *Source: Bureau of Mines*

U.S. Salient Statistics of Coke In Thousands of Net Tons

Year	Production			Producers' Stocks—Jan. 1						Exports to		Value of		Value Per Ton Sold	
					Oven Coke at Plants							Coke Produced[2]	All Coal Chemical Mater.	Oven Coke	Beehive Coke
	Total	Oven	Beehive	Total	Merchant	Furnace	Beehive	Exports	Imports	Canada	Mexico	Mil. $		$	
1968	63,653	62,878	775	5,468	506	4,961	1	792	94	247.5	346.5	1,187	281	22.00	15.00
1969	64,757	64,047	710	5,985	348	5,637	1	1,629	173	292.2	629.8	1,403	289	24.50	16.23
1970	66,525	65,654	871	3,120	99	3,020	1	2,478	153	347.1	376.0	1,899	293	29.97	19.89
1971	57,436	56,664	772	4,113	95	4,018	1	1,509	174	492.4	80.2	1,849	260	37.41	21.45
1972	60,507	59,853	654	3,510	134	3,376	1	1,232	185	488.0	105.2	2,080	295	40.70	22.04
1973	64,325	63,496	829	2,941	351	2,590	1	1,395	1,094	747.5	102.3	2,575	356	42.92	27.31
1974	61,581	60,737	845	1,184	71	1,113	—	1,278	3,540	709.7	158.0	4,609	653	65.74	44.02
1975	57,207	56,494	713	935	25	910	—	1,273	1,819	680.6	107.3	4,607	654	87.64	65.17
1976	58,333	57,728	605	5,001	278	4,718	—	1,315	1,311	754.4	87.7	5,021	920	94.35	72.48
1977[1]	53,509	53,060	449	6,491	314	6,173	—	1,241	1,829	634.9	49.4	4,653	883	103.27	78.87
1978[1]	49,009	48,593	355	6,444	136	6,308	—	693	5,722	299	37.4	5,635	923		
1979[1]	52,943			3,534	184	3,350	—	1,440	3,974	598	61.0	5,459	1,203		
1980[1]	46,132			5,185	595	4,590	—	2,071	659	812	75.0				
1981[1]				8,627	1,106	7,521									

[1] Preliminary. [2] Beehive and oven, coke & breeze. *Source: Bureau of Mines*

Oven Coke Production in the United States In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1968	5,602	5,352	5,686	5,529	5,692	5,468	5,453	5,046	4,633	4,613	4,669	5,137	62,878
1969	5,177	4,873	5,297	5,312	5,514	5,347	5,386	5,412	5,274	5,552	5,333	5,570	64,047
1970	5,332	5,069	5,655	5,468	5,603	5,402	5,442	5,368	5,425	5,680	5,537	5,672	65,654
1971	5,647	5,054	5,752	5,621	5,693	5,268	4,816	3,455	3,976	3,961	3,220	4,200	56,664
1972	4,763	4,651	5,076	5,091	5,237	4,976	5,024	5,088	4,822	5,026	4,914	5,183	59,853
1973	5,364	4,891	5,356	5,262	5,454	5,325	5,307	5,383	5,153	5,358	5,218	5,426	63,496
1974	5,422	4,974	5,265	5,255	5,369	5,218	5,251	5,219	5,056	5,214	4,427	4,067	60,737
1975	4,924	4,750	5,324	5,030	5,052	4,765	4,532	4,427	4,250	4,527	4,365	4,549	56,494
1976	4,551	4,372	5,041	4,884	5,069	4,938	5,007	4,785	4,720	4,857	4,752	4,751	57,728
1977[1]	4,412	4,267	4,696	4,666	4,822	4,686	4,639	4,249	4,069	4,289	4,186	4,077	53,060
1978[1]	3,603	2,741	2,661	3,753	4,398	4,362	4,455	4,379	4,346	4,512	4,383	4,679	49,009
1979[1]	4,448	4,015	4,653	4,389	4,591	4,324	4,386	4,430	4,367	4,460	4,266	4,453	52,943
1980[1]	4,394	4,204	4,444	4,396	4,238	3,686	3,370	3,387	3,295	3,470	3,565	3,683	46,132
1981													

[1] Preliminary. *Source: Bureau of Mines*

U.S. Coke & its Relationship to the Iron Industry and Coal-Chemical Production

Year	Consumption: Apparent Consumption (1,000 Net Tons)	Consumption: In Iron Furnaces (1,000 Net Tons)	Consumption: All Other (1,000 Net Tons)	Lbs. of Coke Consumed Per Net Ton of Pig Iron & Ferro-Alloys	% Yield of Coke From Coal	Lbs. of Coking Coal Consumed Per Net Ton of P. I. & F. A.	Distribution of Coke to Coal-Chemical Materials Produced: Blast Furnace Plants (In Millions of Net Tons)	Foundries (In Millions of Net Tons)	Producer & Water Gas Plants (In Millions of Net Tons)	Other Industrial Plants (In Millions of Net Tons)	Light-Oil Deriv. Mil. Gal.	Ammonium Sulfate[2] Mill. Lbs.	Crude Coal Tar (Mill. Gal.)	Crude Light Oil (Mill. Gal.)	Coke-oven Gas Billion cu. ft.
1967	61,572	56,205	5,367	1,288	69.6	1,850	56.9	3.1	—1.7—		N.A.	1,556	780	252	959
1968	62,438	56,238	6,200	1,263	69.8	1,810	57.1	3.3	—2.5—		N.A.	1,536	761	239	923
1969	66,166	60,176	5,990	1,260	69.4	1,816	61.3	3.5	—3.0—		136	1,464	769	259	962
1970	63,207	58,151	5,056	1,267	69.0	1,833	61.2	3.3	—2.3—		120	1,382	761	244	993
1971	56,689	51,498	5,191	1,261	69.0	1,827	54.0	3.3	—1.6—		95	1,154	679	202	862
1972	60,046	54,607	5,439	1,222	69.0	1,768	56.0	3.4	—1.6—		104	1,208	747	214	916
1973	65,765	60,720	5,045	1,200	68.4	1,754	61.2	3.7	—1.4—		114	1,250	732	226	995
1974	64,092	58,441	5,651	1,219	68.4	1,783	57.2	3.4	—1.2—		95	1,200	677	217	967
1975	53,687	48,817	4,870	1,222	68.4	1,786	49.6	2.6	—.9[illegible]			1,022	646	195	895
1976	56,834	51,561	5,273	1,187	68.9	1,723	52.5	3.0	—1.2[illegible]			1,044	636	198	
1977[1]	54,144	48,510	5,634	1,193	68.9	1,731	48.8	3.3	—1.5—				592	178	
1978[1]	56,984	51,286	5,662	1,439	68.6	1,667	48.1	2.6	—1.1—				541	162	
1979[1]	53,826	50,008	3,818	1,150	68.4	1,681	48.0	2.5	—1.4—				591	175	
1980[1]													534	159	

[1] Preliminary. [2] Or equivalent. *Source: Bureau of Mines*

Average Price[1] of Oven Foundry Coke F.O.B. at Birmingham, Ala. In Dollars Per Net Ton

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1968	33.35	33.35	33.35	34.85	34.85	34.85	34.85	34.85	34.85	34.85	34.85	34.85	34.56
1969	35.85	35.85	35.85	35.85	35.85	35.85	35.85	35.85	35.85	37.85	37.85	37.85	36.35
1970	37.85	37.85	37.85	41.85	41.85	41.85	41.85	41.85	41.85	48.60	48.60	48.60	42.54
1971	48.60	48.60	48.60	48.60	48.60	50.10	50.10	50.10	50.10	50.10	50.10	50.10	49.48
1972	50.10	52.35	52.35	52.35	52.35	52.35	52.35	52.35	52.35	52.35	52.35	52.35	52.16
1973	54.90	54.90	54.90	56.80	56.80	56.80	56.80	56.80	56.80	56.80	56.80	56.80	56.33
1974	59.95	59.95	63.75	73.50	80.50	80.50	80.50	91.00	95.50	100.50	100.50	100.50	82.22
1975	108.00	108.00	108.00	110.50	110.50	110.50	110.50	110.50	110.50	110.50	110.50	110.50	109.88
1976	117.00	117.00	117.00	117.00	117.00	117.00	117.00	117.00	117.00	117.00	117.00	117.00	117.00
1977	123.00	123.00	123.00	123.00	129.00	129.00	129.00	129.00	129.00	129.00	129.00	129.00	127.00
1978	134.00	134.00	134.00	134.00	139.75	139.75	139.75	139.75	139.75	139.75	139.75	139.75	137.83
1979	144.75	144.75	144.75	N.A.	N.A.	N.A.	N.A.	144.75	144.75	146.65	146.65	146.65	145.46
1980	146.65	146.65	146.65	146.65	146.65	146.65	146.65	146.65	146.65	146.65	146.65	146.65	146.65
1981	146.64	146.65											

[1] Merchant plants. *Source: Bureau of Labor Statistics* (0521-0102.01)

Coke (Oven-Coke) Stocks at Plants In Thousands of Short Tons

Year	Jan. 1	Feb. 1	Mar. 1	April 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1968	5,467	5,375	5,226	5,016	4,740	4,525	4,336	4,312	4,738	5,393	5,759	5,929
1969	5,965	5,865	5,565	5,019	4,507	4,162	3,896	3,787	3,816	3,699	3,430	3,320
1970	3,120	3,032	3,034	3,088	3,100	3,098	2,954	3,006	2,963	3,057	3,433	3,777
1971	4,113	4,241	4,054	3,842	3,599	3,343	3,153	3,401	3,818	4,070	4,143	3,596
1972	3,510	3,585	3,611	3,323	3,111	3,022	2,907	3,089	3,185	3,202	3,089	3,011
1973	2,941	2,824	2,590	2,291	2,035	1,796	1,712	1,514	1,520	1,501	1,435	1,313
1974	1,184	1,125	1,139	1,163	1,183	1,238	1,243	1,146	1,197	1,321	1,298	1,064
1975	935	1,054	1,282	1,442	1,733	2,261	2,889	3,522	3,867	3,821	4,108	4,522
1976	4,996	5,092	4,994	5,105	5,062	4,992	4,729	4,641	4,445	4,750	5,179	5,799
1977	6,487	6,950	7,231	7,283	7,038	6,736	6,468	6,516	6,281	6,192	6,554	6,526
1978[1]	6,444	5,937	5,209	3,461	3,189	2,993	2,938	2,846	2,954	3,008	3,128	3,277
1979[1]	3,534	3,479	3,440	3,259	3,405	3,406	3,168	3,223	3,304	3,715	4,208	4,608
1980[1]	5,163	5,531	5,781	5,832	6,063	6,698	7,426	8,133	8,676	9,018	9,011	9,040
1981[1]	8,827											

[1] Preliminary. *Source: Bureau of Mines*

Copper

World mine production of copper in 1980 dropped about 1.4 percent below the 1979 level, primarily because of the labor strike at U.S. mines, according to preliminary data of the U.S. Bureau of Mines. Increased output in some countries, notably Canada and Zaire, offset declines in production in a number of other countries. Output of refined copper (primary plus secondary) in the "market economy" countries in 1980 was estimated to have exceeded 1979 production despite the U.S. strike.

The longest labor strike in the U.S. copper industry since 1968 began on July 1, 1980, and lasted 20 weeks. As a result, domestic mine production decreased from 1.44 million tonnes in 1979 to 1.18 million tonnes in 1980, while refinery production dropped from 2.01 million tonnes to 1.76 million tonnes.

The amount of copper lost because of the strike was estimated at 320,000 tonnes of mine production of recoverable copper and 460,000 tonnes of refined copper, based on the rate of production for the industry in the first 6 months of 1980.

In September, 1980, Anaconda Copper Company announced that its smelter at Anaconda, Mont., and its refinery at Great Falls, Mont., both idled by the strike, would be closed permanently. In December, Asarco Inc. announced that it would permanently close its 140,000 ton-per-year Tacoma copper refinery, which had been shut down since January 1979. These plants accounted for 10 percent of U.S. smelting and 15 percent of U.S. refining capacities.

Apparent consumption of copper in the U.S. in 1980 totaled 2.03 million tonnes, about 14 percent less than in 1979, according to preliminary estimates of the U.S. Bureau of Mines. Consumption of refined copper for 1980 in the market economy countries was estimated to be slightly below the 1979 level. In the United States, most of the copper is consumed as refined metal—71 percent by wire mills and 27 percent by brass mills. The use of copper in 1980 was estimated to be 52 percent electrical; 18 percent construction; 9 percent industrial machinery; 9 percent transportation; and 6 percent others. Old scrap provided 31 percent of the copper consumed in 1980, of which smelters and refiners consumed 61 percent; brass mills, 34 percent; and other categories, 5 percent.

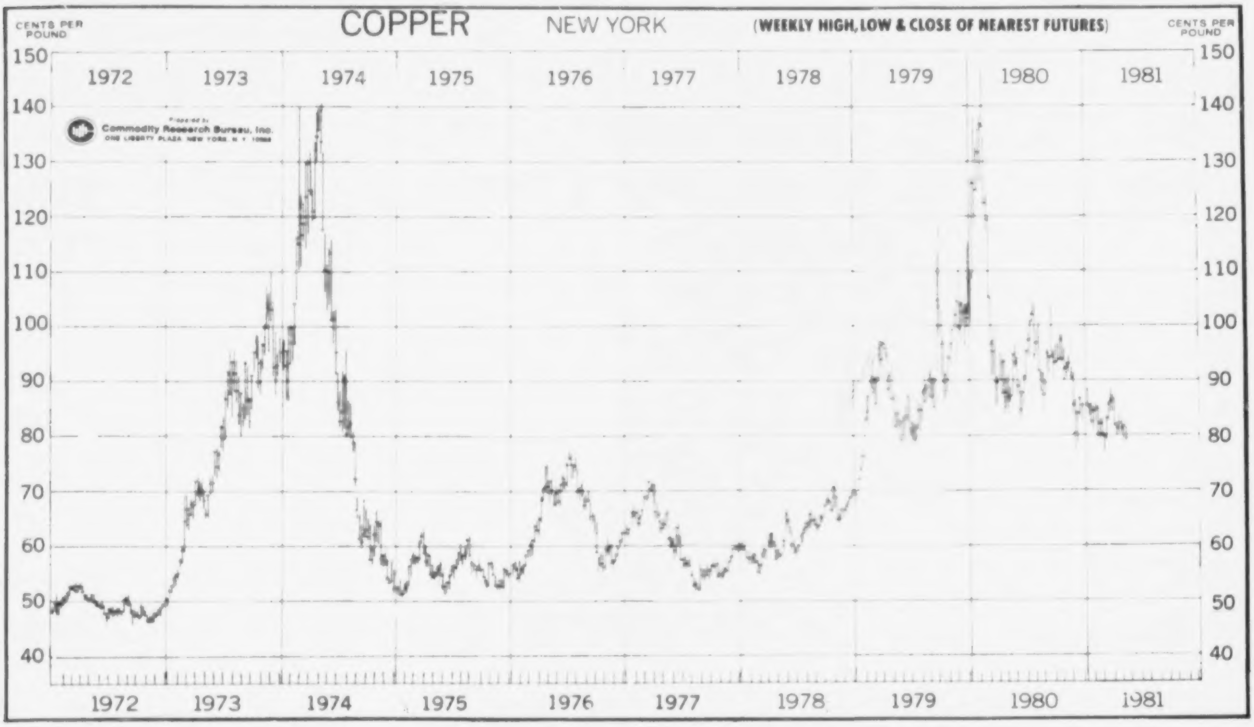
The net import reliance represented an estimated 14 percent of apparent U.S. copper consumption in 1980. Major import sources in the 1976–79 period were Canada, 23 percent; Chile, 27 percent; Zambia, 16 percent; Peru, 13 percent; others, 21 percent.

The domestic producer price for delivered refined copper rose from a monthly average of $1.19 per pound in January, to $1.34 in February and then declined to as low as $0.86 on December 12. The average price for the year was about $1.01 per pound.

The U.S. government stockpile as of November 30, 1980 totaled 26,000 tonnes, versus a stockpile goal of 907,000 tonnes. Combined producer/consumer stocks of copper at the end of 1980 were estimated by the U.S. Bureau of Mines to be about 0.13 million tonnes, about the same as a year earlier.

Futures Markets

Copper futures are traded on the Commodity Exchange, Inc. (Comex) in New York, and on the London Metal Exchange (LME).



World Mine Production of Copper (Content of Ore) In Thousands of Metric[5] Tons

Year	Australia	Canada[3]	Chile	China	Finland	Japan	Mexico	Peru	Zambia	Poland	Zaire	Rep. of So. Africa	Philippines	United States[3]	U.S.S.R.[4] [5]	World Total[1]
1968	120.4	633.3	734.9		33.1	132.2	67.4	234.3	732.9		357.7	141.4	121.6	1,205		5,641
1969	144.5	573.2	770.6		36.5	133.5	72.9	219.1	824.7		393.4	139.1	144.9	1,545		6,224
1970	173.9	672.7	783.4		34.2	131.7	67.3	242.8	754.1		425.1	164.5	176.7	1,720		6,638
1971	195.4	721.4	790.7		31.3	133.4	69.6	228.6	718.0		447.3	173.6	217.8	1.522		6,689
1972	205.9	793.3	800.0		32.1	123.6	86.8	248.0	791.1		472.0	178.5	235.6	1,665	733	7,329
1973	242.8	908.2	810.6		41.2	124.0	88.7	223.4	778.9	170.9	538.6	193.8	243.8	1,718	772	7,845
1974	277.1	905.4	994.4	110	39.9	90.5	91.1	233.2	769.4	218.3	550.5	197.4	249.1	1,597	816	8,063
1975	241.4	808.9	913.0	110	42.8	93.7	86.2	197.3	746.2	260.0	547.1	197.2	249.4	1,413	843	7,679
1976[5]	218.5	730.9	1,005	100	41.7	81.6	89.0	220.3	708.9	267.0	444.4	196.9	237.6	1,457	800	7,451
1977	221.6	759.4	1,056	100	46.7	81.4	89.7	341.0	656.0	289.3	481.6	208.3	272.8	1,364	830	7,661
1978	207.1	659.4	1,036	150	46.9	73.4	87.2	366.5	643.0	321.0	423.8	209.3	264.0	1,358	865	7,557
1979[2]	234.0	643.8	1,061	150	41.1	60.0	90.0	400.4	600.0	325.0	337.0	190.6	297.6	1.444	885	7,607
1980[1]	225	730	1,040					350	600	330	440	210	330	1,175	920	7,500
1981																

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[1] Estimate. [2] Preliminary. [3] Recoverable. [4] Smelter Production. [5] Data prior to 1976 are in THOUSANDS OF SHORT TONS.
Source: Bureau of Mines

World Refined Consumption of Copper[2] In Thousands of Metric Tons

Year	Australia	Belgium	Brazil	Canada	France	W. Germany	Italy	Japan	Spain	Sweden	Un. Kingdom	United States	U.S.S.R.	World Total
1970	106.1	145.0	69.2	229.0	330.7	697.5	274.0	820.6	108.2	86.9	553.7	1,854	985.0	7,284
1971	117.3	147.0	95.3	220.4	343.6	630.5	270.0	805.7	106.7	91.4	517.3	1,834	985.0	7,332
1972	112.8	153.0	110.6	223.8	390.2	672.1	283.0	951.3	119.4	96.9	534.6	2,030	1,030	7,948
1973	135.3	164.4	125.3	231.0	407.8	727.2	295.0	1,202	139.8	114.0	541.2	2,221	1,100	8,754
1974	123.9	178.2	162.0	248.0	414.2	731.0	308.0	880.9	143.9	108.2	496.9	1,995	1,100	8,304
1975	103.7	177.4	155.2	185.2	364.5	634.6	290.0	827.4	119.4	94.4	450.5	1,396	1,220	7,460
1976	113.6	228.1	179.3	206.2	367.1	744.6	322.0	1,050	130.5	87.5	457.6	1,783	1,250	8,509
1977[1]	113.0	239.8	170.0	218.0	378.1	742.0	237.5	1,125	130.0	92.2	507.8	1,677	937.5	6,741
1978														

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[1] Preliminary. [2] World consumption of unwrought refined copper.
Sources: World Bureau of Metal Statistics; Metallgesellschaft, W. Germany

U.S. Salient Statistics of Copper In Thousands of Metric[9] Tons

	New Copper Produced										Stocks—Dec. 31			Appar. Consumption[6]	
	From Domestic Ores						Imports[3]		Exports						
Year	Mines	Smelters	Refineries	From Foreign Ores[2]	Total New	Secondary Recovered[7]	Unmanufactured	Refined	Metallic[4]	Refined[5]	At Producers	Refined	Blister & Materials in Solution	Primary Refined	Primary & Old Copper[8]
1968	1,205	1,235	1,161	276	1,437	521	710	400	314	241	320	48	272	1,576	2,097
1969	1,545	1,547	1,469	274	1,743	575	414	131	241	200	330	39	291	1,683	2,258
1970	1,720	1,605	1,521	244	1,765	504	392	132	274	221	470	130	340	1,585	2,089
1971	1,522	1,471	1,411	181	1,592	445	359	164	263	188	378	75	303	1,623	2,068
1972	1,665	1,649	1,680	193	1,873	458	416	192	242	183	338	57	281	1,901	2,359
1973	1,718	1,705	1,698	170	1,868	486	421	203	293	189	302	37	265	1,902	2,388
1974	1,597	1,532	1,421	234	1,655	483	609	314	246	127	425	101	324	1,778	2,261
1975[9]	1,282	1,247	1,167	143	1,309	335	294	133	305	156	470	187	283	1,191	1,526
1976	1,457	1,326	1,291	106	1,396	380	485	346	218	102	463	172	291	1,656	2,036
1977	1,364	1,265	1,280	77	1,357	410	467	355	91	47	526	212	314	1,625	2,035
1978	1,358	1,270	1,327	122	1,449	502	546	415	187	92	416	153	263	1,831	2,333
1979[1]	1,444	1,313	1,412	104	1,516	6[illegible]4	328	215	231	74	339	64	275	1,746	2,350
1980[1]	1,175	994	1,122	104	1,226			458	205	14		49	272	1,686	2,000

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[1] Preliminary. [2] Also from matte, etc., refinery reports. [3] Data are "general" imports; that is, they include copper imported for immediate consumption plus material entering country under bond. [4] Total exports of copper, exclusive of ore, concentrates, composition metal & unrefined copper. Exclusive also of "other manufacturers of copper." [5] Ingots, bars, etc. [6] Withdrawals from total supply on domestic account. [7] From old scrap only. [8] Old scrap only. [9] Data prior to 1975 are in THOUSANDS OF SHORT TONS. *Source: Bureau of Mines*

COPPER

Consumption of Refined Copper[2] in the United States In Thousands of Metric[4] Tons

	By-Products						By Class of Consumer						
Year	Cathodes	Wire Bars	Ingot & Ingot Bars	Cakes & Slabs	Billets	Other	Wire Mills	Brass Mills	Chemical Plants	Secondary Smelters	Foundries	Miscellaneous	Total Consumption
1968	164.5	1,191.7	169.6	122.4	221.6	10.5	1,189.3	652.5	1.6	6.4	30.6		1,880.3
1969	241.1	1,270.8	179.8	172.5	258.4	19.6	1,296.3	797.1	3.1	7.0	38.7		2,142.2
1970	247.0	1,275.8	145.7	157.1	202.0	15.7	1,338.7	660.6	2.2	7.0	34.7		2,043.3
1971	309.4	1,236.9	118.3	154.8	182.3	17.7	1,324.9	655.8	1.5	6.9	30.4		2,019.5
1972	425.3	1,331.9	141.4	160.5	161.4	18.2	1,526.3	667.2	.9	10.0	34.5		2,238.9
1973	531.2	1,356.0	147.8	193.4	174.7	33.9	1,672.3	714.4	N.A.	10.6	N.A.		2,437.0
1974	579.7	1,136.7	143.1	178.0	138.6	18.1	1,474.3	670.2	.7	9.2	19.4	20.4	2,194.2
1975	527.9	722.8	72.5	97.7	75.7	4.1	1,061.3	439.0	.5	4.5	14.0	15.3	1,534.5
1976	846.0	768.0	93.5	123.8	84.0	8.6	1,346.0	574.9	.5	3.1	15.4	19.7	1,991.9
1977	965.5	861.3	90.2	115.0	103.3	11.2	1,511.2	628.6	N.A.	6.6	N.A.	N.A.	2,185.0
1978[4]	1,026.1	794.7	111.9	117.1	114.6	24.9	1,517.4	619.2	.4	7.5	12.4	32.3	2,189.3
1979[1]	1,086.5	701.9	78.4	105.6	129.5	24.9	1,517.4	619.2	.4	6.3	11.9	30.1	2,158.4
1980[3]	948.6	583.0	54.7	84.3	117.4	35.1	1,308.9	511.6		2.4			1,865.8
1981													

[1] Preliminary. [2] Primary and secondary. [3] Estimate. [4] Data prior to 1978 are in THOUSANDS OF SHORT TONS. *Source: Bureau of Mines*

United States Exports of Refined Copper[1] to Selected Countries In Thousands of Metric[3] Tons

Year	Total U.S. Exports	United Kingdom	China Mainland	Belgium	Brazil	Canada	France	W. Germany	India	Italy	Netherlands	Taiwan	Sweden	Switzerland	Japan
1968	240.7	37.8	—	7.3	31.4	5.7	30.4	29.5	15.2	39.0	9.3	—	3.9	2.3	18.8
1969	200.3	26.8	—	2.3	18.3	23.4	18.8	27.0	13.2	40.7	8.6	—	4.9	2.5	15.7
1970	221.2	25.2	—	4.3	24.7	13.0	18.6	20.1	14.7	39.1	20.5	1.1	2.0	2.4	9.3
1971	187.7	13.2	—	4.8	18.9	15.4	21.9	43.0	14.7	24.3	7.1	4.9	2.5	1.8	10.5
1972	182.7	12.1	—	3.3	16.1	18.3	25.4	28.5	.3	28.5	3.4	4.7	2.5	1.6	32.7
1973	189.4	11.7	—	4.7	21.9	12.8	23.3	17.6	—	31.5	2.9	5.8	1.2	.6	46.3
1974	126.5	14.5	—	2.5	24.0	11.4	19.1	11.7	.1	26.5	4.4	1.1	1.4	.4	4.0
1975	172.4	15.1	—	13.2	24.7	6.7	22.8	34.1	.1	22.2	14.9	4.0	1.0	.6	3.0
1976	111.9	20.3	—	1.0	2.8	4.7	21.0	26.8	—	15.6	5.0	—	5.0	.4	4.7
1977	51.5	7.3	—	3.2	.1	8.1	9.8	10.2	—	6.2	2.4	—	1.5	.2	1.5
1978[3]	91.9	13.8	3.0	2.5	3.3	5.1	7.0	18.1	—	19.0	3.0	.9	4.2	.3	10.0
1979	73.7	6.5	3.1	2.5	6.2	4.5	12.5	3.5	—	11.4	6.6	1.2	2.8	.3	2.0
1980[2]	14.5	2.0	—	.6	1.5	2.9	1.9	.8	.1	1.4	.6	.3	.1	.1	.8
1981															

[1] Bars, ingots or other forms. [2] Preliminary. [3] Data prior to 1978 are in THOUSANDS OF SHORT TONS.
Source: Department of Commerce

U.S. Mine Production of Recoverable Copper, by Selected States In Thousands of Metric[2] Tons

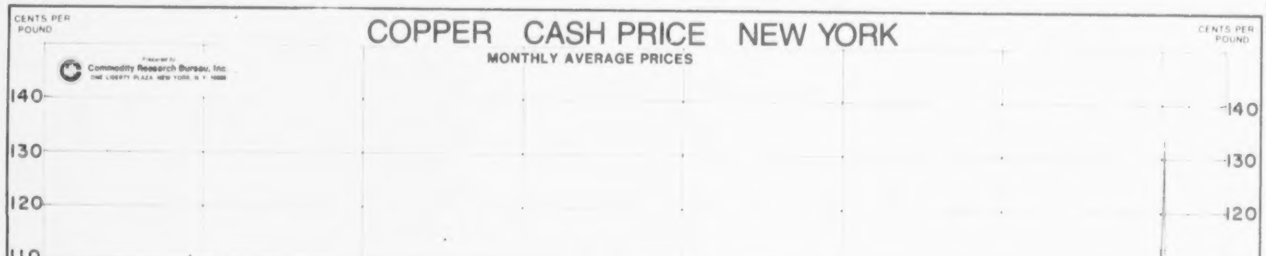
Year	Arizona	California	Colorado	Idaho	Michigan	Missouri	Montana	Nevada	New Mexico	Pennsylvania	Tennessee	Utah	Maine	Other States	Grand Total
1968	628.0	1.2	3.5	3.5	74.8	5.5	69.5	77.2	90.8	4.9	14.2	228.2	.1	2.5	1,204.6
1969	801.4	1.1	3.6	3.3	75.2	12.7	103.3	104.9	120.0	3.4	15.4	297.7	1.3	2.3	1,544.6
1970	917.9	2.3	3.7	3.6	67.5	12.1	120.4	106.7	166.3	2.5	15.5	295.7	2.7	2.5	1,719.7
1971	820.2	.5	3.9	3.8	56.0	8.4	88.6	96.9	157.4	3.3	13.9	263.5	2.5	3.2	1,522.2
1972	908.6	.6	3.9	2.9	67.3	11.5	123.1	101.1	168.0	2.6	11.3	259.5	1.2	3.1	1,664.8
1973	927.3	.4	3.1	3.6	72.2	10.3	132.5	93.7	204.7	1.8	8.5	256.6	1.1	2.1	1,717.9
1974	858.8	.2	3.0	2.8	67.0	12.7	131.1	84.1	196.6	—	6.3	230.6	1.5	2.3	1,597.0
1975[2]	737.7	.3	3.2	2.9	66.9	12.9	79.8	73.7	132.7	—	9.1	160.7	1.8	.4	1,282.2
1976	929.3	.3	2.2	3.1	39.7	10.0	82.7	52.8	156.4	—	10.1	168.2	1.6	.2	1,456.6
1977	838.0	.2	1.7	3.7	38.4	10.6	78.2	60.8	149.4	—	5.6	176.1	1.2	.3	1,304.4
1978	891.4	N.A.	1.2	3.9	N.A.	10.8	67.3	20.5	127.8	—	11.3	186.3	—	37.1	1,357.6
1979	945.0	N.A.	.4	3.6	N.A.	13.0	69.9	N.A.	164.3	—	N.A.	193.1	—	53.3	1,443.6
1980[1]	767.1		.4	2.7		14.0	37.9		149.6			158.6		45.0	1,175.3
1981															

[1] Preliminary. [2] Data prior to 1975 are in THOUSANDS OF SHORT TONS. *Source: Bureau of Mines*

Producers' Prices of Electrolytic (Wirebar[1]) Copper, Delivered U.S. Destinations In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1971	51.48	50.37	50.59	52.87	52.87	52.87	52.87	52.87	52.87	52.87	52.19	50.37	52.09
1972	50.38	50.66	52.63	52.63	52.63	52.63	52.67	50.63	50.63	50.63	50.63	50.63	51.44
1973[1]	52.41	54.55	59.85	60.13	60.13	60.13	60.13	60.13	60.13	60.13	60.13	66.56	59.53
1974	68.70	68.70	68.70	68.70	81.19	86.09	86.31	86.31	83.01	78.23	75.79	73.03	77.06
1975	68.86	64.32	64.32	64.32	64.32	63.67	63.02	64.31	64.31	64.31	64.31	64.31	64.53
1976	63.63	63.63	64.73	69.26	70.63	70.63	74.63	74.63	74.63	72.34	70.63	66.10	69.62
1977	66.13	68.63	72.54	74.41	72.77	70.13	68.10	63.89	60.63	60.63	60.63	62.11	66.72
1978	63.63	63.59	62.35	64.63	64.90	66.78	63.99	67.34	67.63	70.13	71.68	71.73	66.53
1979	76.15	89.41	94.65	98.66	91.04	87.66	86.02	89.95	95.07	98.84	98.44	106.8	92.75
1980	118.05	133.83	106.23	94.61	93.16	92.39	103.10	100.60	98.73	99.41	96.98	89.20	102.19
1981	88.64	86.07	87.32	88.44									

[1] Prior to Feb. 1973 prices are for delivered F.O.B. Cars. *Source: American Metal Market*



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U.S. Imports (General) of Copper (Unmanufactured), by Sources and Types In Thousands of Metric[2] Tons

Year	Ore & Concentrates	Blister	Refined	Scrap	Australia	Canada	Mexico	W. Germany	Chile	Peru	Philippines	Yugoslavia	Zambia	Rep. of So. Afr.	Total U.S. Imports
1968	27.1	270.7	400.3	11.4	5.0	150.5	7.3	55.3	180.5	112.2	14.5	—		42.9	710.0
1969	38.7	237.9	131.2	5.7	7.8	97.5	5.1	2.6	122.3	121.4	18.3	1.7		25.2	413.9
1970	32.7	224.4	132.1	2.1	3.0	96.8	4.4	—	114.9	110.0	18.7	—		28.9	392.5
1971	30.8	156.7	164.0	7.5	1.6	135.4	7.6	4.5	51.7	102.4	13.6	4.3	6.7	21.2	359.5
1972	53.7	157.4	192.4	10.8	2.5	150.8	18.6	—	60.1	93.2	30.1	26.6	—	23.6	415.6
1973	42.1	154.1	201.5	18.9	2.0	155.2	16.7	8.8	58.8	100.0	17.8	1.3	5.5	26.4	420.5
1974	53.4	207.8	313.6	31.2	2.7	151.3	16.8	8.7	131.9	108.9	14.3	15.1	2.8	38.4	608.6
1975	64.9	89.0	146.8	14.4	3.5	117.5	16.4	—	55.0	43.9	12.6	21.5	—	26.0	324.1
1976	70.7	44.5	381.5	19.7	7.0	148.0	9.1	—	102.0	40.1	15.0	45.6	128.3	4.9	534.7
1977	42.1	46.2	390.8	19.9	3.6	131.2	15.1	10.5	119.7	62.3	18.1	16.8	77.9	11.0	516.7
1978[2]	20.9	78.7	414.7	21.4	10.0	77.3	5.8	8.5	175.8	94.8	12.0	10.9	79.8	15.5	546.4
1979[1]	22.4	68.1	215.2	22.2	2.1	89.0	8.5	6.1	116.2	52.8	15.4	3.4	15.9	2.0	328.3
1980[3]	13.8	47.0	458.1	22.8	5.4	152.4	8.3	.5	126.6	52.5	8.9	4.5	64.9	2.2	542.4
1981															

Note: Includes refined; black, blister, and converter; scrap; and copper content of ore, matte, and regulus. [1] Preliminary. [2] Data prior to 1978 are in THOUSANDS OF SHORT TONS. [3] Estimate. *Source: Department of Commerce; Bureau of Mines*

Exports of Refined Copper from the United States In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.	Total
1968	2.5	1.1	2.2	5.4	19.8	30.4	31.1	31.8	39.9	25.4	28.1	23.0	240.7
1969	13.0	14.6	24.0	19.0	15.7	17.0	16.3	18.5	17.9	15.6	13.7	14.9	200.3
1970	18.6	20.0	18.8	24.0	26.2	17.1	15.0	17.5	13.6	17.4	15.6	18.2	222.0
1971	22.9	18.7	26.3	23.7	23.9	17.5	4.6	5.4	10.4	4.1	9.4	20.8	187.7
1972	10.5	26.6	22.8	20.2	14.4	12.9	11.0	12.3	12.8	13.7	10.7	14.7	182.7
1973	15.9	15.6	12.8	17.7	13.5	18.3	19.7	18.4	16.2	15.9	13.6	11.9	189.4
1974	8.2	13.1	9.5	10.0	19.8	12.4	6.9	7.0	6.9	8.2	13.3	11.3	126.5
1975	19.7	20.8	14.3	24.9	21.3	13.5	9.8	6.7	11.5	12.5	9.0	8.4	172.4
1976	11.2	8.5	10.8	10.9	8.6	9.4	8.7	9.4	10.0	11.5	7.3	6.8	113.1
1977	3.7	1.8	3.6	5.2	5.2	5.2	5.5	1.6	4.4	4.4	5.0	6.9	52.7
1978	4.7	4.9	11.9	7.3	11.4	10.1	7.2	10.2	22.2	5.3	5.3	8.8	109.3
1979	9.8	9.4	11.6	10.0	8.9	8.7	4.8	2.9	2.9	2.7	7.3	1.5	80.5
1980	1.0	1.4	1.9	1.5	1.5	2.0	1.9	.9	.4	.5	1.0	3.4	17.4
1981													

Source: Department of Commerce

Dealers' Buying Price of No. 2 Heavy Copper Scrap at N.Y. In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1968	39.50	39.76	39.98	33.31	28.36	28.53	29.16	28.61	29.48	30.70	30.58	35.11	32.76
1969	37.69	39.34	39.78	43.95	42.12	42.79	41.09	44.17	44.88	44.00	44.88	49.81	42.88
1970	46.69	46.72	49.69	52.27	47.68	41.00	38.02	35.93	33.38	30.61	26.75	24.68	39.45
1971	23.45	24.55	28.20	32.02	28.60	27.14	27.60	27.00	26.86	28.34	28.95	28.14	27.57
1972	30.71	32.35	35.17	35.00	34.09	31.50	30.00	30.17	29.85	29.55	29.00	29.20	31.38
1973	31.84	35.68	42.93	44.21	44.50	46.50	46.50	62.07	56.82	61.77	68.26	66.50	49.80
1974	60.50	66.39	72.79	75.91	73.66	60.60	51.40	49.20	41.30	38.67	35.12	33.07	54.88
1975	31.86	30.50	33.93	33.82	31.07	29.50	32.50	36.69	38.07	37.33	36.20	35.86	33.94
1976	36.98	37.92	39.76	41.95	44.10	43.66	46.93	45.73	43.71	38.48	35.00	34.10	40.69
1977	34.00	35.73	41.50	40.63	39.62	35.91	35.00	34.04	33.00	33.00	33.00	33.00	34.23
1978	34.00	35.61	35.59	39.73	39.18	41.77	40.50	41.89	42.50	44.70	45.40	44.75	40.47
1979	47.07	58.82	65.46	68.93	63.14	59.05	57.79	58.85	62.03	62.89	62.25	65.00	60.94
1980	74.91	82.35	70.30	60.18	57.60	56.50	65.36	64.88	64.21	65.37	66.08	58.36	65.51
1981	57.60	55.50	57.14	59.50									

Source: American Metal Market

High, Low & Closing Prices of May Copper Futures on the Commodity Exch., Inc., N.Y. (COMEX)

In Cents per Pound

Year of Delivery		Year Prior to Delivery										Delivery Year					Life of Delivery Range
		Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	
1978	High	75.80	76.40	71.90	68.50	63.60	59.20	59.90	60.60	58.80	62.40	62.70	59.80	62.00	62.40	64.40	76.40
	Low	75.50	67.60	63.80	61.80	59.90	55.40	56.90	56.60	56.30	58.80	58.10	56.00	55.50	57.00	57.80	55.40
	Close	75.80	68.40	64.80	64.40	59.90	57.70	58.60	57.40	58.80	61.20	59.00	56.50	60.60	59.10	64.40	—
1979	High	67.90	68.20	71.80	71.00	68.95	70.60	70.00	75.10	72.55	72.75	80.10	93.50	98.15	99.00	93.10	99.00
	Low	61.90	63.00	63.80	63.50	64.00	66.90	66.55	68.80	67.60	69.40	70.85	79.50	84.70	86.70	80.80	86.70
	Close	66.60	65.20	70.60	64.30	67.65	67.60	69.75	73.45	69.70	72.50	79.95	92.70	94.60	92.60	81.65	—
1980	High	97.60	97.50	93.10	87.85	87.35	94.50	111.90	117.05	102.50	106.50	140.80	148.40	123.30	94.90	95.50	148.40
	Low	86.70	88.70	81.90	82.00	79.75	83.70	87.20	87.50	91.50	95.00	104.20	121.00	85.20	83.80	84.80	79.75
	Close	94.85	93.10	82.95	82.75	82.80	93.40	105.80	92.60	102.50	104.75	131.60	123.00	87.10	87.90	94.60	—
1981	High	135.00	105.50	101.90	100.00	107.70	103.90	106.80	102.00	100.00	96.80	94.20	87.95	88.30	87.40		
	Low	98.40	93.60	94.00	90.40	97.20	92.00	94.00	97.20	94.90	82.30	84.75	81.80	79.30	80.10		
	Close	99.20	100.50	98.40	97.80	99.00	94.35	97.30	98.10	96.20	89.20	87.00	82.55	86.40	81.15		
1982	High	100.00	99.65														
	Low	92.80	94.00														
	Close	98.85	95.20														

Source: Commodity Exchange, Inc. of N.Y. (COMEX)

Month End Open Interest of Copper Futures at COMEX In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	45,821	46,415	48,399	47,315	54,740	49,447	49,408	51,314	60,159	59,732	56,750	55,287
1979	53,776	56,481	55,719	48,857	45,572	43,992	39,372	58,966	63,825	58,451	62,659	64,363
1980	63,132	60,834	41,546	31,618	31,923	32,454	37,303	38,497	46,737	54,201	52,666	44,225
1981	47,300	47,641	48,699	49,784								
1982												

Source: Commodity Exchange, Inc. of N.Y. (COMEX)

Volume of Trading of Copper Futures at COMEX In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	75,219	88,765	119,423	112,834	117,745	135,363	98,274	160,456	95,360	158,815	151,284	95,150	1,408,688
1979	154,378	228,837	234,044	234,554	212,934	186,097	139,912	210,387	208,869	200,123	163,074	145,732	2,318,941
1980	243,069	205,232	185,692	121,708	102,054	130,678	148,698	125,062	169,370	132,850	127,110	156,556	1,848,079
1981	116,295	131,960	143,662	140,605									
1982													

Source: Commodity Exchange, Inc. of N.Y. (COMEX)

Commodity Exchange Inc. (COMEX) Warehouse Stocks of Copper In Thousands of Short Tons

Year	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1974	5.9	3.0	1.0	7.2	5.9	10.3	7.7	10.5	10.3	14.1	16.6	34.3
1975	43.2	53.6	59.0	60.8	68.3	70.6	67.6	73.4	74.8	77.7	89.7	95.9
1976	100.1	100.1	100.9	95.9	94.7	98.6	114.1	128.2	144.0	164.2	175.8	186.5
1977	201.0	204.1	211.1	214.0	214.4	211.4	211.1	205.1	201.0	200.1	195.1	189.1
1978	184.4	181.8	182.8	178.5	175.6	175.4	177.8	180.7	181.9	180.4	179.9	185.1
1979	179.2	170.8	156.4	133.6	118.3	89.9	70.7	61.5	56.8	57.0	64.9	71.3
1980	107.8	114.1	132.0	145.7	149.8	155.5	167.3	181.7	190.8	185.4	178.6	170.9
1981	179.6	179.3	179.8	173.3	182.4							

Source: Commodity Exchange, Inc.-N.Y. (COMEX)

COPPER

Refined Copper Stocks in the U.S.A. In Thousands of Short Tons (Recoverable Copper Content)

Year	Jan. 1	Feb. 1	Mar. 1	April 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1968	55.4	61.8	58.4	68.6	53.3	66.2	58.1	53.1	55.2	50.9	44.3	52.5
1969	56.6	69.2	73.9	62.4	47.2	43.8	34.7	41.8	43.6	46.2	57.0	56.2
1970	45.9	52.0	58.2	67.4	58.2	65.2	53.7	57.0	54.9	69.7	80.2	135.6
1971	160.6	173.3	174.5	164.3	131.3	110.4	70.4	59.9	61.0	80.8	100.8	106.7
1972	103.0	131.3	152.8	124.3	123.1	125.1	128.7	123.9	140.9	157.8	161.0	158.2
1973	157.4	142.6	140.4	126.1	97.2	95.0	82.2	72.0	71.5	63.1	55.3	36.5
1974	49.1	49.9	43.8	57.5	66.5	61.1	39.8	42.9	54.8	61.5	89.4	135.7
1975	194.9	242.7	259.2	297.8	320.6	334.6	338.2	349.5	341.8	312.3	314.9	324.6
1976	360.7	363.4	370.9	347.8	343.0	325.2	317.1	350.4	355.8	356.1	372.8	416.5
1977	473.8	469.3	487.0	472.3	442.1	447.6	435.0	408.9	370.6	409.4	418.0	456.9
1978	471.1	488.7	491.6	470.2	480.5	465.5	464.0	430.9	418.0	405.9	416.4	408.9
1979	367.0	318.4	287.5	262.1	237.4	197.8	176.0	174.6	158.0	154.6	148.6	167.3
1980	186.3	203.5	228.2	237.1	269.1	277.3	295.7	310.6	301.0	274.6	265.0	246.0
1981[1]	253.0	261.6	249.4	236.8								
1982												

[1] Preliminary. *Source: American Bureau of Metal Statistics, Inc.*

Refined Copper Deliveries to Fabricators Outside the U.S.A.
In Thousands of Short Tons (Recoverable Copper Content)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1968	192.7	172.9	194.0	173.2	188.1	206.1	187.5	225.0	223.0	241.9	223.1	246.1	2,473
1969	226.6	234.2	221.6	228.0	230.1	225.3	228.9	206.3	246.7	243.4	278.7	254.3	2,824
1970	213.0	202.4	239.8	210.6	244.5	239.1	228.7	232.9	240.2	210.9	239.8	233.2	2,735
1971	220.9	213.4	251.1	266.7	238.8	240.8	230.2	190.9	198.1	224.1	242.9	240.3	2,758
1972	227.9	230.8	236.2	226.0	244.8	249.7	220.5	214.8	268.0	222.8	242.5	266.1	2,850
1973	266.4	249.3	317.7	257.9	243.4	275.8	211.0	268.4	263.5	270.3	255.0	239.7	3,119
1974[2]	342.0	302.7	365.3	328.7	356.9	306.6	291.1	325.5	316.4	339.8	334.8	303.5	3,913
1975	287.7	315.0	330.4	288.8	301.9	304.8	231.1	232.8	250.4	274.3	269.2	303.0	3,389
1976	308.4	309.3	351.0	359.9	336.2	362.0	296.3	331.0	380.7	372.9	315.8	349.3	4,073
1977	331.6	305.6	405.0	342.6	364.9	360.0	326.5	344.9	339.8	350.7	374.0	390.8	4,236
1978	338.5	370.0	422.6	372.1	400.8	426.0	362.4	402.9	382.7	376.8	360.2	376.8	4,591
1979	424.2	395.9	460.4	342.0	349.1	383.3	376.8	357.7	408.5	390.2	377.6	386.4	4,652
1980	386.2	403.2	400.0	407.6	396.9	376.6	357.3	346.7	389.5	406.5	374.4	375.8	4,621
1981[1]	336.9	353.6											
1982													

[1] Preliminary. [2] New series. Not comparable prior to 1974. *Source: American Bureau of Metal Statistics, Inc.*

Refined Copper Deliveries to Fabricators in the U.S.A.
In Thousands of Short Tons (Recoverable Copper Content)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1968	69.9	97.6	90.5	164.2	161.9	157.3	153.4	159.1	157.4	181.7	159.6	154.2	1,707
1969	159.5	156.7	170.1	170.5	160.0	163.2	144.2	151.5	134.0	163.0	166.0	175.2	1,914
1970	150.7	152.1	161.9	163.3	165.5	155.6	158.0	145.3	149.5	142.5	121.5	150.6	1,817
1971	156.8	151.5	164.7	170.8	190.7	193.1	71.0	97.3	126.1	139.1	157.5	141.7	1,760
1972	134.6	151.6	180.6	164.2	181.4	186.9	148.2	145.8	163.2	180.0	172.2	176.7	1,985
1973	190.6	171.2	207.4	191.9	191.7	187.5	162.3	147.3	163.6	191.5	185.5	165.4	2,155
1974	170.7	161.8	178.4	198.4	204.1	186.4	129.5	109.5	143.1	152.3	118.8	86.1	1,911
1975	99.3	84.3	94.2	95.8	115.0	118.2	110.5	127.0	137.5	131.2	117.2	115.7	1,346
1976	137.9	132.7	206.2	175.5	171.7	158.6	150.6	134.5	151.0	150.6	122.6	137.4	1,829
1977	166.6	138.2	202.0	195.6	185.3	192.4	104.5	100.6	100.5	145.7	135.9	141.0	1,808
1978	137.7	141.3	190.2	148.7	175.9	159.8	133.4	168.9	179.2	170.4	177.7	179.7	1,963
1979	191.1	174.8	193.5	182.4	204.7	192.4	166.4	179.3	157.4	190.4	161.4	156.7	2,151
1980	173.5	153.7	193.5	167.8	176.3	175.0	98.7	85.0	83.7	106.6	128.7	154.5	1,697
1981[1]	152.8	154.4	199.3										
1982													

[1] Preliminary. *Source: American Bureau of Metal Statistics, Inc.*

Refined Copper Production Outside the U.S.A. In Thousands of Short Tons (Recoverable Copper Content)

	Refined													Crude	
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total	Primary	Secondary
1968	199.3	201.6	210.1	190.1	207.9	209.4	209.4	214.9	207.7	208.2	212.9	205.6	2,477	2,817	63.7
1969	222.6	200.6	219.8	216.6	234.7	229.7	217.7	215.2	212.4	209.3	224.1	238.3	2,641	3,023	76.4
1970	198.0	205.2	217.6	220.0	233.0	254.1	211.0	224.0	234.4	229.4	235.7	232.6	2,695	3,004	85.6
1971	209.2	192.7	224.7	222.4	227.1	222.3	229.9	205.1	220.1	229.9	243.9	240.5	2,668	2,948	82.3
1972	203.4	228.3	231.2	229.5	242.2	257.1	239.2	233.8	238.8	252.2	239.7	257.0	2,853	3,074	69.5
1973	220.8	205.1	260.3	238.0	241.7	236.3	254.1	261.5	234.2	275.6	251.0	265.1	2,918	3,185	89.9
1974[2]	339.3	310.0	351.5	340.0	365.6	347.4	376.2	368.5	367.6	381.4	351.5	344.5	4,244	—4,818—	
1975	323.3	299.5	348.1	336.6	330.8	314.7	303.9	305.4	318.2	338.4	311.3	335.6	3,866	—4,449—	
1976	330.3	314.3	335.3	341.0	336.7	355.1	365.3	355.7	371.7	375.2	359.3	359.2	4,199	—4,947—	
1977	358.1	352.1	380.2	363.0	383.5	386.7	361.7	379.7	372.0	367.4	388.5	393.5	4,486	—5,046—	
1978	387.3	344.0	395.9	348.7	401.9	388.1	371.9	348.4	350.0	381.9	364.5	351.5	4,434	—4,868—	
1979	359.8	347.9	360.1	336.9	345.1	364.9	358.1	377.2	366.5	400.9	388.0	382.6	4,388	—4,791—	
1980	384.2	382.8	408.4	398.3	418.7	396.8	392.2	402.9	386.1	394.4	371.8	389.9	4,727	—4,968—	
1981[1]	359.7	347.9													
1982															

[1] Preliminary. [2] New series. Not comparable prior to 1974. *Source: American Bureau of Metal Statistics, Inc.*

Refined Copper Production in the U.S.A. In Thousands of Short Tons (Recoverable Copper Content)

	Refined													Crude	
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total	Primary	Secondary
1968	21.8	32.9	46.9	102.7	162.6	157.4	161.0	175.6	181.2	194.5	184.2	186.5	1,607	1,107	156.2
1969	173.3	164.5	178.3	160.3	160.9	155.8	156.0	149.8	160.1	181.7	167.4	177.2	1,985	1,448	198.5
1970	172.1	164.3	178.9	161.7	184.1	154.2	161.8	150.4	152.4	162.6	175.9	185.3	2,004	1,504	180.2
1971	175.6	168.4	182.6	159.5	177.4	164.2	55.4	87.5	132.7	151.2	170.0	162.6	1,787	1,315	106.8
1972	159.5	161.0	184.7	168.2	181.1	179.3	143.5	162.6	178.4	174.2	170.8	163.5	2,027	1,517	119.8
1973	168.6	165.5	185.7	165.6	185.5	173.8	154.1	151.3	151.8	173.2	158.6	163.3	1,997	1,526	120.1
1974	157.7	135.5	164.6	163.9	157.3	140.8	101.1	87.2	130.9	177.5	171.1	153.9	1,742	1,334	104.7
1975	146.0	108.8	142.8	136.5	140.8	129.9	124.7	118.2	112.7	133.3	118.3	138.8	1,551	1,239	72.6
1976	130.3	126.6	127.7	141.1	140.8	141.6	144.0	139.0	141.1	158.1	153.3	154.0	1,698	—1,445—	
1977	140.9	140.9	162.3	150.6	166.2	152.4	52.2	46.3	124.4	120.6	137.3	113.0	1,507	—1,386—	
1978	129.0	112.5	143.2	141.0	145.3	135.1	96.1	138.9	144.9	163.4	162.4	133.3	1,645	—1,434—	
1979	135.6	135.8	152.2	149.8	154.6	149.4	132.3	144.9	137.5	148.7	170.0	155.5	1,766	—1,542—	
1980	161.0	149.5	162.3	170.4	158.7	167.2	52.4	28.7	27.3	61.0	85.8	136.9	1,361	—1,211—	
1981[1]	133.5	116.3	152.2												
1982															

[1] Preliminary. *Source: American Bureau of Metal Statistics, Inc.*

Refined Copper Stocks Outside the U.S.A. In Thousands of Short Tons (Recoverable Copper Content)

Year	Jan. 1	Feb. 1	Mar. 1	April 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1968	272.2	257.9	265.1	260.3	251.6	267.1	280.5	315.8	320.8	334.2	320.5	327.1
1969	316.1	313.7	285.5	305.5	300.7	311.6	320.1	315.6	323.0	314.4	291.0	237.5
1970	234.7	235.4	245.4	233.9	255.4	259.5	291.5	280.2	284.1	279.0	307.0	305.8
1971	318.6	330.8	327.7	332.7	314.2	313.4	308.9	306.1	314.1	327.6	331.4	342.2
1972	371.8	349.0	358.1	368.2	380.1	378.2	378.8	400.9	422.4	394.2	420.1	421.8
1973	410.3	361.4	322.4	263.0	249.7	250.5	215.8	267.9	274.0	249.4	255.8	261.8
1974[2]	348.7	320.9	323.4	311.5	320.6	332.7	370.3	444.0	459.4	494.4	526.9	543.1
1975	591.2	628.8	624.5	655.8	723.1	766.0	784.7	861.5	933.4	1,007	1,072	1,108
1976	1,135	1,150	1,149	1,086	1,048	1,045	1,040	1,080	1,112	1,102	1,102	1,141
1977	1,117	1,158	1,200	1,166	1,183	1,185	1,195	1,210	1,229	1,247	1,240	1,225
1978	1,201	1,231	1,139	1,139	1,104	1,099	1,052	1,059	1,001	960.2	962.0	963.1
1979	942.2	878.2	862.4	765.1	758.8	756.7	727.2	687.1	696.6	648.2	635.4	641.3
1980	619.5	598.3	560.9	534.6	516.5	525.9	531.2	530.9	553.2	527.9	489.1	472.6
1981[1]	476.2	485.2	471.0									
1982												

[1] Preliminary. [2] New series. Not comparable prior to 1974. *Source: American Bureau of Metal Statistics, Inc.*

Corn

The 1980 U.S. corn crop was 6,648 million bushels, 16 percent less than the record crop of 7,939 million bushels in 1979. The decrease, caused by extremely hot weather and drought in many states, reduced the average U S. yield to 91 bushels per harvested acre, down nearly 19 bushels from the 1979 record. Both planted and harvested acreage were up from recent years. The proportion of planted acres harvested for grain was 87 percent, 2 percent less than in 1979. This was attributed to high temperatures and lack of rainfall during the growing season, resulting in more acreage being utilized as silage or forage.

The 1980 season started favorably with good field conditions during planting and the early part of the growing season for most areas of the Corn Belt. However, hot and dry weather during the critical tasseling period inhibited pollination and caused considerable stress on the crop. Yields were affected in the western part of the Corn Belt, the Southeast, the Southwest, and the East Coast. Some areas, mainly the northern Corn Belt, received above normal moisture in August and reported good yields.

Corn disappearance during 1980/81 was estimated at 7,400 million bushels, slightly below the 1979/80 level of 7,627 million bushels. Exports continued at record levels and were expected to total 2,550 million bushels by season's end, nearly 5 percent larger than 1979/80's record of 2,433 million bushels. Also, increased use of corn for gasohol and sweetener production was expected to boost estimated food and industrial use to 750 million bushels, 100 million above 1979/80. Feed use of corn in 1980/81 was estimated at 4,100 million bushels, a decline of nearly 10 percent from 1979/80. This estimate reflected a reduction in livestock production for the remainder of the season due to higher feed costs and narrower feeding margins, poor forage supplies, and high interest rates.

Carryover stocks at the end of the 1980/81 marketing year were estimated at 866 million bushels, more than 46 percent below the 1,617 million bushel carryover from the previous season. Corn stocks in all positions as of April 1, 1981 totaled 3,995 million bushels, 18 percent below April 1, 1980 stocks. As of May 1, 1981 there were 245 million bushels of corn in CCC stocks and 481 million bushels in the farmer-owned Grain Reserve. Most of the CCC stocks were purchased as a result of the partial embargo of grain sales to the USSR, imposed on January 4, 1980. The embargo was removed on April 24, 1981.

The USDA estimated that U.S. producers expect to plant 84.0 million acres of corn for all purposes in 1981. If these intentions are realized, planted acreage will be fractionally less than 1980 acreage of 84.1 million acres.

U.S. Government Price Support

The Agricultural Act of 1980 was signed into law on December 3, 1980. It raised the loan rate 15 cents per bushel, to $2.25 for "regular" corn and established a $2.40 per bushel loan rate for corn entered into the Grain Reserve and waived first-year interest charges for 1980- and 1981-crop corn placed in the farmer-owned reserve. The act further provided that farmers who already had their 1980 crop in the reserve could request the higher loan rates. No change was made in reserve release and call prices. Loan rates on regular 9-month loans were not affected.

This legislation made it possible for farmers to get an interest-free reserve loan on 1980 and 1981 crops at a higher rate than what had been available, but only if the farmer-owned reserve was not in call status.

The legislation raised the minimum sales price on grain owned by the CCC to at least 105 percent of the call level. This was the release level that CCC had announced it would follow prior to the legislation, although by law CCC could have offered CCC owned grain at 150 percent of the loan rate.

Corn was called from Reserves II and III on January 16, 1981 as the farm price rose above the $3.26 per bushel call level. Producers had until January 15 to place corn in the reserve. It was announced on February 5, 1981 that a 30 day extension for repaying loans had been approved due to transportation difficulties in the Midwest. Loans repaid after the April 15 due date, on corn in Reserves II and III, were to be charged interest at the rate of 15.25 percent beginning April 16, 1981. Approximately 500 million bushels of corn were placed in the interest-free reserve, from the time the program was implemented in early December, 1980. No deficiency payment was made on 1980 crop corn.

The 1981 corn crop was the last to be covered by the Food and Agriculture Act of 1977. Congress planned to consider new legislation relating to crops in 1982 and beyond. The provisions of the 1981 corn program were similar to those of the 1980 program. No set-aside acreage is required for eligibility for corn program benefits.

Farmers are not required to plant within their normal crop acreage (NCA) to be eligible for program benefits. Thus, farmers will be eligible for loans, target price and disaster protection, and the reserve program on their entire acreage planted for harvest. However, any increases in planted acreage in 1981 will not be added to a farm's NCA in future years. To qualify for full target price protection on corn, acreage for 1981 harvest cannot exceed 1980 considered plantings of that crop (actual plantings plus weather-prevented plantings).

On March 31, 1981 the target price for 1981 crop corn was raised to $2.40 per bushel from $2.35 in 1980. Also, the 1981 loan rates were announced. The "regular" 1981 loan rate was raised to $2.40 per bushel from $2.25 in 1980, and the loan rate for corn entered into the Grain Reserve was raised to $2.55 per bushel from $2.40 the previous year.

Futures Markets

Corn futures are traded on the Chicago Board of Trade and on the MidAmerica Commodity Exchange.

World Production of Corn or Maize In Millions of Metric Tons

Crop Year	United States	Argentina	Brazil	Mexico	South Africa	France	China	India	Italy	Bulgaria	Hungary	Yugoslavia	Romania	Indonesia	U.S.S.R.	World Total
1968–9	113.0	6.9	12.7	8.5	5.0	5.4	23.5	5.7	4.0	1.8	3.8	6.8	7.1	3.1	7.4	243.3
1969–0	119.1	9.4	14.2	6.5	6.2	5.7	24.3	5.7	4.5	2.4	4.8	7.8	7.7	2.3	10.1	260.0
1970–1	105.5	9.9	13.5	8.7	8.6	7.6	26.4	7.5	4.8	2.4	4.0	6.9	6.5	2.9	7.8	255.1
1971–2	143.3	5.9	12.9	9.1	9.4	8.8	25.3	5.1	4.5	2.5	4.7	7.4	7.9	2.6	8.6	292.1
1972–3	141.6	9.0	13.8	8.1	4.2	8.2	22.0	6.2	4.8	2.9	5.5	7.9	9.5	2.0	9.8	286.3
1973–4	143.4	9.9	15.0	9.0	11.1	10.7	28.0	5.8	5.1	2.6	5.9	8.3	7.4	2.9	13.2	314.7
1974–5	118.5	7.7	16.4	7.8	9.1	8.7	30.7	5.6	5.0	1.6	6.2	8.0	7.4	3.0	12.1	286.5
1975–6	147.3	5.9	17.9	9.2	7.3	8.2	32.0	7.0	5.3	3.0	7.1	9.4	9.2	2.6	7.3	321.6
1976–7	157.9	8.3	18.8	9.6	9.7	5.5	31.4	6.3	5.3	3.0	5.2	9.1	11.6	2.6	10.1	336.3
1977–8	161.8	9.7	13.9	9.7	10.2	8.6	34.4	5.9	6.4	2.6	6.0	9.9	10.1	3.0	11.0	345.6
1978–9	180.0	9.0	16.3	10.2	8.3	9.5	55.9	6.2	6.2	2.2	6.7	7.6	10.2	4.0	9.0	386.0
1979–0[1]	197.2	6.4	19.7	9.2	10.7	10.2	56.9	5.0	6.2	3.2	7.4	10.1	12.5	3.3	8.4	412.0
1980–1[2]	185.0	11.2	20.0	10.0	10.5	9.3	58.5	6.3	6.4	2.9	6.8	9.4	10.5	3.5	9.0	402.0
1981–2																

[1] Preliminary. [2] Estimated. *Source: Foreign Agricultural Service, U.S.D.A.*

Acreage and Supply of Corn in the United States In Millions of Bushels

Year Beginning October	Planted All Purposes	Harvested For Grain	Harvested For Silage	Harvested For Forage	Yield, Per Harv. Acre-Bus.	Carry-over, October 1 Farm	Carry-over, October 1 CCC Bins	Carry-over, October 1 Others[3]	Carry-over, October 1 Total	Grain Production	Imports[2]	Total (All Supply Grain)
	In Millions of Acres											
1968–9	65.1	56.0	7.9	.8	79.5	781.8	103.3	277.2	1,162	4,450	1.0	5,620
1969–0	64.3	54.6	7.9	.6	85.9	728.2	143.3	241.9	1,113	4,687	1.0	5,806
1970–1	66.9	57.4	8.1	.7	72.4	575.6	111.3	318.3	1,005	4,152	4.0	5,161
1971–2	74.2	64.1	8.8	.7	88.1	426.7	24.5	215.5	667	5,646	1.0	6,309
1972–3	67.1	57.5	8.4	.5	97.0	751.3	26.3	348.7	1,126	5,580	1.0	6,700
1973–4	72.3	62.1	9.0	.6	91.3	404.6	20.3	283.7	709	5,671	1.0	6,380
1974–5	77.9	65.4	10.8	.6	71.9	287.6	— 195.1 —		483	4,701	1.8	5,187
1975–6	78.6	67.6	9.8	.6	86.4	191.3	— 168.2 —		359	5,841	1.8	6,204
1976–7	84.4	71.5	11.3	.9	88.0	229.8	— 169.4 —		399	6,289	2.5	6,691
1977–8	83.6	71.6	9.3	.6	90.8	446.1	— 438.0 —		884	6,505	2.6	7,394
1978–9	81.7	71.9	8.6	.4	101.0	659.3	— 444.7 —		1,104	7,268	1.2	8,381
1979–0	81.4	72.4	8.0	.4	109.7	794.5	—1,103.9—		1,304	7,939	1.1	9,244
1980–1[1]	84.1	73.1	9.3	.6	91.0	920.9	— 696.6 —		1,617	6,648	1.0	8,266
1981–2[4]	84.0											

[1] Preliminary. [2] Includes grain equivalent of cornmeal & flour. [3] Interior mills & elevators and terminal mkts. [4] Estimate. *Source: Commodity Economics Division, U.S.D.A.*

Corn Production Estimates and Disposition and Value in the U.S.

Crop Year	Corn for Grain Production Estimates July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1	Final	Farm Disposition Feed & Seed	Farm Disposition Sold[1]	Season Avg. Price[1] $ Per Bu.	K.C. White No. 3 $ Per Bu.	Value of Production (Million Dollars)
	In Thousands of Bushels							In Millions of Bushels				
1968–9	4,452,125	4,555,893	4,636,456	4,587,115	4,439,758	4,374,840	4,449,542	2,095	2,355	1.08	1.63	4,826
1969–0	4,286,285	4,309,776	4,312,267	4,350,257	4,444,199	4,577,864	4,687,057	2,130	2,557	1.15	1.75	5,416
1970–7	4,819,939	4,692,864	4,402,765	4,188,281	4,103,973	4,109,792	4,152,243	1,888	2,264	1.33	2.01	5,514
1971–2	———	5,345,057	5,265,641	5,399,670	5,551,769	5,540,253	5,646,260	2,447	3,200	1.08	1.23	6,101
1972–3	5,042,048	4,947,986	5,124,425	5,265,817	5,400,390	5,473,727	5,579,832	2,328	3,252	1.57	2.30	8,743
1973–4	———	5,661,379	5,768,407	5,762,927	5,678,141	5,643,256	5,670,712	2,217	3,453	2.55	3.22	14,663
1974–5	———	4,965,950	4,994,730	4,717,600	4,621,248	4,651,167	4,701,402	1,755	2,947	3.03	4.69	14,232
1975–6	6,045,621	5,849,662	5,687,248	5,737,266	5,803,596	5,766,991	5,840,757	2,117	3,712	2.54	2.92	14,789
1976–7	6,552,665	6,186,979	5,891,823	5,865,243	6,063,459	6,216,032	6,289,169	2,305	3,961	2.15	2.96	13,472
1977–8	6,330,668	6,092,054	6,229,084	6,303,034	6,366,864	6,357,424	6,505,041	2,514	3,911	2.02	3.66	12,944
1978–9	6,145,421	6,503,190	6,797,650	6,823,720	6,890,310	7,081,849	7,269,921	2,783	4,303	2.25	2.70	15,875
1979–0[2]	6,662,681	7,108,938	7,268,175	7,390,365	7,585,535	7,763,771	7,938,819	2,976	4,963	2.52		19,904
1980–1[2]	7,284,036	6,645,842	6,534,370	6,466,622	6,461,244	6,647,534		2,502	4,146	3.27		21,687
1981–2												

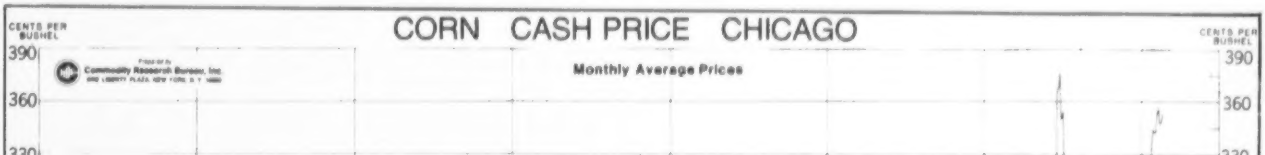
[1] Includes an allowance for unredeemed loan & purchase agreement deliveries valued at the average loan rate. [2] Preliminary. ***Source: Economic Research Service; Crop Reporting Board, U.S.D.A.***

U.S. Corn Supply and Disappearance In Millions of Bushels

Year & Periods Begin Oct. 1	Supply				Disappearance — Domestic Use							Ending Stocks		
	Beginning Stocks	Production	Imports	Total Supply	Food	Alc. Beverages	Seed	Feed	Total	Exports	Total Disappearance	Gov't. Owned[1]	Privately Owned[2]	Total
1976–7	399.6	6,289	2.5	6,691	419.4	73.9	20.1	3,608	4,121	1,684	5,805	—	885.9	885.9
Oct.–Dec.	399.6	6,289	.6	6,689	98.6	15.4	—	1,165	1,279	498.0	1,777	—	4,890	4,890
Jan.–Mar.	4,902	—	.3	4,902	98.8	18.2	4.0	1,076	1,197	299.5	1,597	—	3,293	3,293
Apr.–May	3,301	—	.5	3,302	74.5	14.8	11.9	545.6	646.7	282.1	928.8	—	2,365	2,365
June–Sept.	2,370	—	1.1	2,371	147.6	25.5	4.0	800.2	977.2	504.5	1,482	—	884.1	884.1
1977–8	885.9	6,505	2.6	7,394	462.5	70.4	18.0	3,710	4,260	1,948	6,208	3.1	1,098	1,111
Oct.–Dec.	884.1	6,505	.7	7,392	107.2	15.7	—	1,266	1,389	418.3	1,807	.2	5,552	5,552
Jan.–Mar.	5,503	—	.9	5,553	108.4	17.0	3.6	1,083	1,212	414.5	1,627	.2	3,909	3,909
Apr.–May	3,877	—	.3	3,910	78.1	13.4	10.8	567.7	670.0	370.2	1,040	.2	2,861	2,861
June–Sept.	2,837	—	.7	2,862	168.8	24.3	3.6	792.6	989.3	744.8	1,734	13.1	1,098	1,111
1978–9	1,111	7,268	1.2	8,381	486.2	69.3	19.5	4,369	4,944	2,133	7,077	99.7	1,204	1,304
Oct.–Dec.	1,111	7,268	.1	8,379	119.7	17.1	—	1,470	1,606	454.0	2,060	77.3	6,242	6,319
Jan.–Mar.	6,319	—	.4	6,320	108.4	16.9	3.9	1,264	1,393	426.3	1,819	98.8	4,402	4,500
Apr.–May	4,500	—	.2	4,501	85.0	13.0	11.7	716.5	826.2	387.2	1,213	100.6	3,187	3,287
June–Sept.	3,287	—	.5	3,288	173.1	22.3	3.9	918.9	1,118	865.6	1,984	99.7	1,204	1,304
1979–0[3]	1,304	7,939	1.1	9,244	557.5	72.2	20.0	4,544	5,194	2,433	7,626	256.3	1,361	1,618
Oct.–Dec.	1,304	7,939	.3	9,243	124.7	16.3	—	1,553	1,694	662.9	2,357	99.7	6,787	6,886
Jan.–Mar.	6,886	—	.3	6,887	114.4	18.4	4.0	1,310	1,447	582.0	2,029	101.2	4,756	4,857
Apr.–May	4,857	—	.1	4,857	87.0	13.9	12.0	688.9	801.4	385.6	1,187	180.5	3,490	3,670
June–Sept.	3,670	—	.4	3,671	231.4	23.6	4.0	992.2	1,251	802.1	2,053	256.3	1,361	1,618
1980–1[3]	1,618	6,648	1.0	8,266	657.0	73.0	2.0	4,350	5,100	2,600	7,700	—	—	566
Oct.–Dec.	1,618	6,648	.2	8,265	140.0	15.0	—	1,529	1,684	727.8	2,412	254.3	5,599	5,853
Jan.–Mar.														
Apr.–May														
June–Sept.														

[1] Uncommitted inventory. [2] Includes quantity under loan & farmer-owned reserve. [3] Preliminary.

Source: Commodity Economics Division, U.S.D.A.



Distribution of Corn in the United States In Millions of Bushels

Year Beg. Oct.	Shipments: Wet Corn Milling (Grind)	Corn Meal[4]	Corn Flour Etc.	Hominy Grits (Food)	Breakfast Foods[3]	Distilled Liquors	Fermented Malt Liquors	Total Shipments	Seed	Livestock Feed[5]	Exports (Incl. Grain Equiv. of Pdt's.)	Total Utilization	Domestic Disappearance
1970–1	242	24	8	17	23	24	45	383	17	3,581	517	4,494	3,977
1971–2	246	21	10	14	24	25	45	385	15	3,997	796	5,183	4,387
1972–3	284	20	12	13	24	29	45	427	16	4,304	1,258	5,991	4,733
1973–4	295	19	14	13	25	33	47	446	18	4,205	1,243	5,896	4,653
1974–5	315	18	13	10	24	16	49	445	18	3,226	1,149	4,826	3,677
1975–6	343	18	15	11	24	21	50	482	20	3,603	1,711	5,804	4,093
1976–7	362	17	17	10	25	21	53	505	20	3,608	1,684	5,805	4,121
1977–8	405	17	18	10	25	19	52	546	20	3,783	1,948	6,282	4,334
1978–9[2]	430	18	19	9	26	18	50	570	20	4,369	2,133	7,077	4,944
1979–0[2]									20	4,544	2,433	7,626	5,194
1980–1[1]									20	4,350	2,600	7,700	5,100
1981–2													

[1] Preliminary. [2] Estimate. [3] Assumes sizeable quantities of corn flour are purchased by breakfast food mfg. from the dry milling industry. [4] Regular & degermed. [5] Feed & waste (residual, mostly feed).
Source: Commodity Economics Division, U.S.D.A.

Corn (Shelled & Ear) Stocks in the United States In Millions of Bushels

Year	On Farms: Jan. 1	Apr. 1	June 1[3]	Oct. 1[3]	Off Farms: Jan. 1	Apr. 1	June 1[3]	Oct. 1[2]	Total Stocks: Jan. 1	Apr. 1	June 1[3]	Oct. 1[3]
1970	3,390	2,263	1,426	576	993	768	520	430	4,383	3,031	1,945	1,005
1971	2,755	1,875	1,179	427	1,013	670	394	240	3,769	2,545	1,572	667
1972	3,551	2,483	1,589	751	1,149	869	584	375	4,700	3,381	2,173	1,126
1973	3,689	2,385	1,373	405	1,141	955	564	304	4,831	3,340	1,937	709
1974	3,357	2,012	1,063	288	1,116	850	381	195	4,473	2,861	1,443	483
1975	2,541	1,509	804	191	1,080	705	346	168	3,621	2,214	1,150	359
1976	3,196	1,920	1,290	233	1,270	913	577	166	4,467	2,833	1,867	399
1977	3,345	2,134	1,578	446	1,544	1,159	787	438	4,890	3,293	2,365	884
1978	3,824	2,517	1,849	659	1,679	1,360	989	445	5,503	3,877	2,837	1,104
1979	4,638	3,178	2,318	794	1,681	1,322	969	509	6,319	4,500	3,287	1,304
1980[1]	5,042	3,441	2,578	921	1,844	1,416	1,093	697	6,886	4,857	3,670	1,617
1981[1]	4,140	2,651			1,717	1,344			5,857	3,995		
1982												

[1] Preliminary. [2] Old crop only. [3] Data prior to 1976 are *as of July 1.* *Source: Crop Reporting Board, U.S.D.A.*

Production of Corn (For Grain) in the United States, by States In Millions of Bushels

Year	Illinois	Indiana	Iowa	Kansas	Kentucky	Michigan	Minn.	Missouri	Nebraska	No. Car.	Ohio	Pa.	South Dakota	Wisconsin	Texas
1970	735.6	374.1	866.6	82.2	47.0	115.7	384.3	173.1	366.9	70.0	240.2	81.3	100.2	152.4	—
1971	1,067	556.4	1,178	124.5	91.1	119.4	475.2	272.1	450.5	89.2	322.6	77.7	120.8	225.8	—
1972	1,015	507.9	1,230	130.0	83.2	142.9	455.6	227.5	534.0	102.4	284.3	64.8	154.5	203.6	—
1973	981.6	534.5	1,207	154.0	85.9	146.5	513.4	228.8	554.6	114.8	243.2	81.1	146.3	173.5	—
1974	811.8	387.6	968.0	131.9	88.2	118.5	365.8	146.3	399.0	117.8	265.5	89.1	76.9	161.2	—
1975	1,254	551.7	1,118	141.0	87.8	167.2	407.4	170.1	503.2	106.5	310.6	88.6	83.3	198.4	—
1976	1,240	693.0	1,174	171.8	138.7	153.9	330.4	173.9	518.5	150.4	393.5	103.5	37.2	151.0	186.0
1977	1,163	633.4	1,092	161.3	132.3	197.2	600.0	201.4	648.5	88.7	380.1	106.7	126.9	291.2	161.7
1978	1,240	669.6	1,478	153.0	119.9	194.4	643.8	200.1	762.8	121.6	379.1	115.9	177.6	294.0	144.0
1979	1,414	675.4	1,664	172.0	132.6	237.5	606.0	240.0	822.3	128.4	417.5	121.6	210.9	317.2	132.3
1980[1]	1,066	602.9	1,463	116.6	103.6	247.0	610.1	109.7	603.5	103.8	440.7	96.0	121.9	348.4	117.0
1981															

[1] Preliminary, December estimate. *Source: Crop Reporting Board, U.S.D.A.*

CORN

Corn Under Price Support through the End of the Month (Cumulative Totals from Current Season's Crop)
In Millions of Bushels

Crop Year	Sept.	Oct.	Nov.	Dec.	Jan.	Feb	Mar.	Apr.	May	June	July	Aug.	Sept.	Total
1970–1		22.3	91.6	171.9	280.2	297.8	310.3	316.1	318.9	320.8	322.0	—	—	324.0
1971–2		60.2	313.2	585.9	833.9	881.8	907.6	918.9	923.5	937.2	950.4	—	—	952.0
1972–3		20.7	100.4	245.3	360.2	395.5	438.0	417.8	419.3	419.8	—	—	—	420.0
1973–4		12.8	109.5	183.0	244.4	253.4	257.4	259.7	260.3	260.5	—	—	—	
1974–5		9.3	24.4	49.6	69.2	69.2	71.6	75.2	76.6	76.8	—	—	—	
1975–6		18.7	52.7	112.1	137.3	142.8	145.9	146.6	147.0	147.0	147.0	—	—	
1976–7	1.5	18.5	102.6	204.8	238.0	252.8	261.1	266.4	272.5	274.5	—	—	—	
1977–8	31.31	90.3	517.8	710.0	903.2	966.9	1,007	1,018	1,032	1,041	1,045	—	—	
1978–9	9.51	57.4	303.6	458.5	583.5	605.0	616.2	627.1	629.7	637.5	639.5	639.8	—	
1979–0	2.2	17.3	106.1	206.3	347.8	409.5	461.7	488.8	539.1	545.8				
1980–1	2.3	44.6	145.0	386.0	746.7	795.2								
1981–2														

Source: U.S. Department of Agriculture

Corn Price Support Data in the United States

								Stocks at Close of Mkt. Year (Sept. 30)					CCC Inventory As of Dec. 31	
Year Begin. Oct. 1	National Avg. Loan Rate	Grain Reserve Loan Rate	Target Price	Placed Under Loan	Redemptions	Resealed	Total Deliveries[2]	CCC Inventory	Under CCC Loan	Farmer Owned Reserve	"Free" Stocks	Total Stocks	CCC Owned	Under CCC Loan
	¢ Bush.			Millions of Bushels										
1968–9	135	—	—	403.4	262.6	130.2	36.0	295.1	442.1	0	381.2	1,118.4	260.5	633.3
1969–0	135	—	—	398.0	289.8	106.2	2	254.9	346.2	0	404.1	1,005.2	296.4	563.4
1970–1	135	—	—	323.3	205.8	112.3	6	105.0	237.6	0	324.1	666.7	215.4	454.2
1971–2	135	—	—	954.4	559	377	16	160.1	536.7	0	430.1	1,126.9	141.5	759.5
1972–3	141	—	—	419.7	—			79.1	89.8	0	539.0	707.9	140.5	733.3
1973–4	164	—	—	260.6	—			7.3	5.3	0	471.3	483.9	0.9	189.7
1974–5	110	—	—	76.8	77			0.3	0.6	0	360.5	361.4	6.6	48.6
1975–6	110	—	138	147.0	147			0.1	23.4	0	376.2	399.7	0.4	110.3
1976–7	150	—	157	266	267			0	148.2	0	737.7	885.9	0.1	206.3
1977–8	200	—	200	1,159	689			13.1	415.3	315.5	367.5	1,111.4	0.5	762.5
1978–9	200	—	210	641	519			99.7	115.7	549.9	538.6	1,303.9	77.3	406.6
1979–0	210	—	220	557	374			256.3	82.6	636.4	642.2	1,617.5	99.7	214.4
1980–1[1]	225	240	235	747	26								254.3	262.8
1981–2[1]	240	255	240											
1982–3														

[1] Preliminary. [2] Includes "delivered to CCC" from original program and deliveries from reseal program and over-deliveries as determined by weight of farm-stored grain when delivered to CCC.
Source: Agricultural Stabilization and Conservation Service, U.S.D.A.

Average Price Received by Farmers for Corn in the U.S. In Cents Per Bushel

Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Average[1]
1970–1	134	129	136	142	143	143	141	138	143	136	119	111	133
1971–2	100	97	108	109	109	110	113	115	113	114	115	122	108
1972–3	119	120	142	139	135	137	142	161	199	203	268	215	157
1973–4	217	218	239	259	276	268	241	245	257	291	337	330	255
1974–5	345	332	327	307	286	267	268	266	268	272	295	276	303
1975–6	262	233	237	244	248	250	246	261	274	282	264	260	254
1976–7	233	202	224	234	234	235	231	225	212	188	163	160	215
1977–8	167	188	197	200	203	215	224	229	228	216	201	198	202
1978–9	197	202	209	211	218	222	227	235	249	264	254	251	225
1979–0	241	227	238	245	239	240	236	242	249	273	292	301	252
1980–1	299	310	319	319	322	325	320						
1981–2													

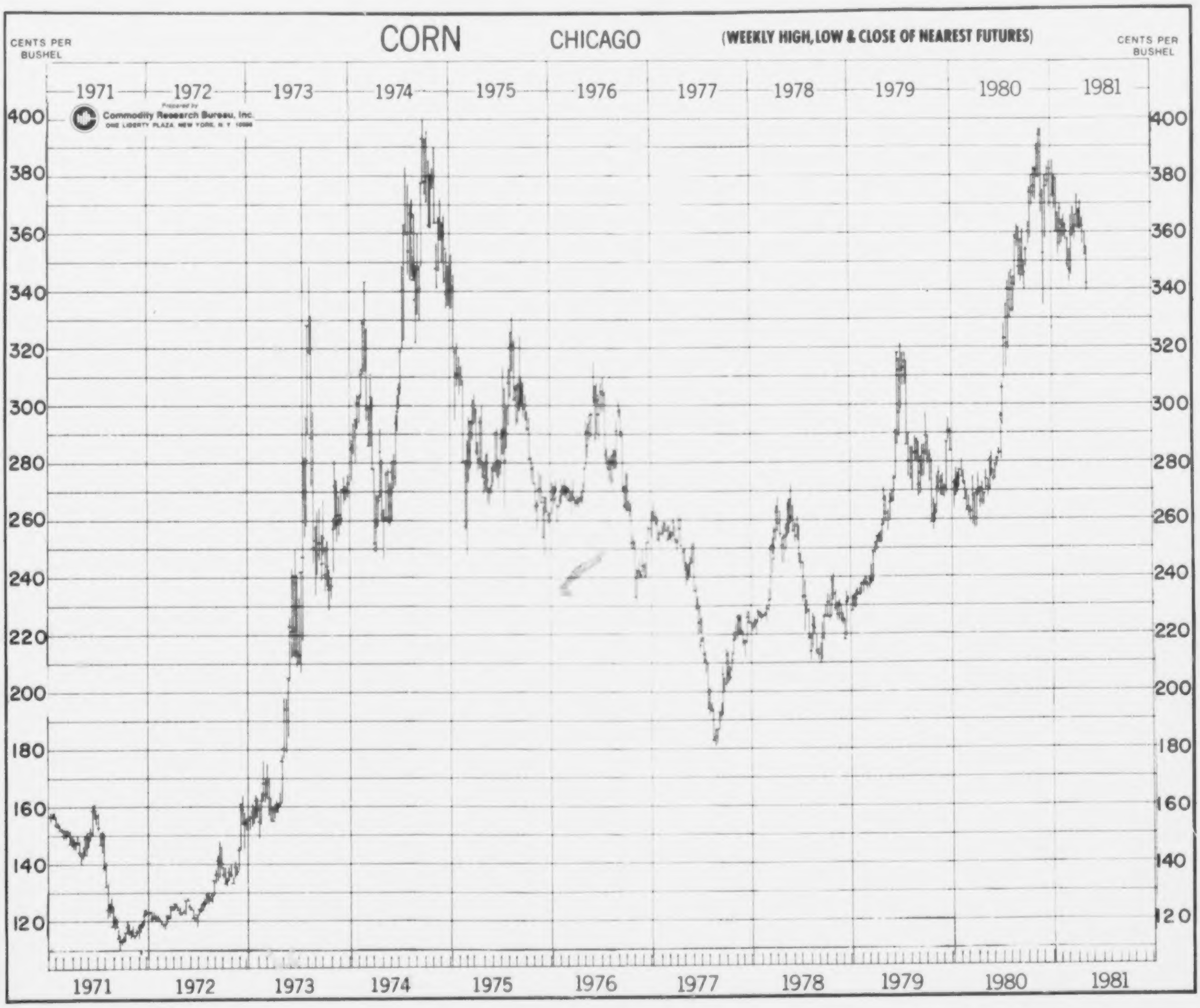
[1] Weighted average by sales. *Source: Crop Reporting Board, U.S.D.A.*

Average Cash Price of Corn, No. 2 Yellow[3] at Chicago In Cents Per Bushel

Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Average[1]
1968–9	106	113	114	118	116	115	120	130	130	127	128	119	117
1969–0	116	115	115	122	123	122	126	130	134	138	147	150	125
1970–1	140	141	152	159	157	155	151	151	159	149	129	115	144
1971–2	110	107	121	122	121	123	126	129	127	129	130	136	118
1972–3[3]	132	133	157	158	159	159	165	201	242	252	291	247	191
1973–4	237	250	268	290	313	299	269	270	293	335	363	355	295
1974–5	374	348	347	319	296	290	296	282	289	295	312	299	312
1975–6	274	259	259	262	270	268	268	284	296	296	287	277	275
1976–7	249	233	244	253	254	252	250	241	227	205	178	180	230
1977–8	184	214	219	219	221	236	251	257	251	228	217	213	226
1978–9	222	228	227	229	235	242	253	266	283	300	282	278	254
1980–1[2]	343	343	354	356	349	348	261	270	270	308	336	344	281
1980–1[2]	343	343	354	356	349	348							
1981–2													

[1] Weighted average by carlot sales. [2] Preliminary. [3] Prices prior to 1972–3 are for NO. 3 YELLOW AT CHICAGO.

Source: Economic Research Service, U.S.D.A.



CORN

High, Low & Closing Prices of May Corn Futures at Chicago In Cents per Bushel

Year of Delivery		Year Prior to Delivery										Delivery Year					Life of Delivery Range
		Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	
1978	High	279	286¾	271½	270	250¾	222¼	222½	228¾	238½	233¾	232¼	231¼	257¼	267¾	265¾	278
	Low	272½	265½	257	242¼	214	203¼	205¼	216	228	223	224½	228	228½	245	245¼	203¼
	Close	273¼	271¼	265½	243¾	214¼	205½	217	227¾	231½	226¾	229¾	228½	256¼	250¾	262¼	—
1979	High	—	271	286½	281¾	265½	249	243½	256¼	251½	247¾	244¾	250¾	252	260	270¾	286½
	Low	—	251¾	251½	263¼	246¼	230½	232¼	241½	242	237¾	236¼	242¼	242½	249¼	255½	230½
	Close	—	256	283	266½	249	236¼	243	249¾	246¼	240½	243½	246¾	251½	259¼	261¼	—
1980	High	279	287¼	295	336	341½	307½	306¼	318	307½	305½	302¾	294	280	276	277	341½
	Low	272½	275¾	279½	285½	288	283½	287¾	286	287¼	294¼	277	276	256½	257¾	265¼	256½
	Close	278½	287¼	287	319	292	303½	303¼	293¼	302½	301	287¾	276¼	258¼	265¾	271¾	—
1981	High	325	322	325	318	358	369½	379	394	418	416½	393	380	369	372½		
	Low	311	308¾	311¾	307	318¼	341½	357	358	385¼	354¼	362½	365	350¼	355½		
	Close	312½	312¾	313	318	356¾	368¾	365¼	385¾	415¾	385¼	364¾	369¾	364¾	361		
1982	High	398¼	410¾														
	Low	385	385¼														
	Close	397¾	390½														

Source: Chicago Board of Trade

Month End Open Interest of Corn Futures at Chicago In Millions of Bushels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	657.5	705.9	754.8	673.1	784.2	569.2	552.3	544.0	632.0	758.4	667.8	644.0
1979	680.9	720.3	784.2	810.7	859.6	951.3	898.7	889.8	860.0	899.8	857.3	836.2
1980	838.9	799.0	789.8	787.7	766.7	721.6	1,048.8	1,382.4	1,398.0	1,587.9	1,575.5	1,315.0
1981	1,216.5	1,107.5	1,002.4	846.5								
1982												

Source: Chicago Board of Trade

Volume of Trading of Corn Futures at Chicago In Millions of Bushels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	1,755	1,599	3,405	3,255	3,159	3,147	2,495	2,663	1,989	2,729	2,723	1,716	30,635
1979	1,734	2,281	2,739	3,302	3,751	5,705	5,806	3,999	3,135	4,522	3,794	2,592	43,386
1980	3,287	3,227	3,493	3,690	3,265	3,362	6,722	7,310	6,287	6,609	6,455	6,027	59,735
1981	4,848	[illegible],495	4,796	5,222									
1982													

Source: Chicago Board of Trade

U.S. Exports[2] of Corn (Including Seed), By Country of Destination In Millions of Bushels

Yr. Begin. October	USSR	Belg. & Luxem.	Canada	France	W. Germany	Greece	Israel	Italy	Japan	Mexico	Netherlands	Norway	Spain	United Kingdom	Total All Exports
1973–4	129	5	51	—	122	35	7	85	251	48	137	3	101	38	1,226
1974–5	40	13	37	2	115	20	9	107	206	48	154	3	104	27	1,125
1975–6	414	35	30	8	172	29	11	102	228	39	163	4	86	45	1,699
1976–7	115	80	16	14	209	38	13	90	301	56	182	3	41	111	1,668
1977–8	412	63	9	2	98	41	16	81	338	68	113	2	66	80	1,930
1978–9	388								353						2,115
1979–0[1]															

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[1] Preliminary. [2] Exports of grain only. Does not include corn exported under the food for relief or charity program.
Source: Foreign Agricultural Service, U.S.D.A.

Corn Oil

Supply & Distribution of Corn Oil In Millions of Pounds

Year Beginning Oct.	Supply: Production	Supply: Imports	Supply: Stocks Oct. 1	Supply: Total Supply	Disappearance: Food Uses: Shortening	Food Uses: Margarine	Food Uses: Salad & Cooking Oil	Food Uses: Other	Total Food Uses	Non-Food Uses: Foots & Loss	Non-Food Uses: Other	Total Non-Food Uses	Total Domestic Disappearance	Total Exports & Shipments
1968–9	467	8	41	516	11	177	188	9	384	32	—	32	416	29
1969–0	474	3	71	548	14	181	215	6	417	37	—	37	454	34
1970–1	485	1	60	546	8	188	202	6	403	41	—	41	445	43
1971–2	499	—	58	557	1	190	203	10	403	35	1	36	439	49
1972–3	523	—	70	593	3	207	231	6	447	44	1	45	492	44
1973–4	528	1	57	586	6	198	198	2	404	45	1	46	450	68
1974–5	465	2	68	535	7	185	164	1	356	42	—	43	399	84
1975–6[1]	644	1	52	697	4	212	297	1	514	44	1	45	559	98
1976–7[2]	669	10	41	720	3	235	303	2	543	37	1	38	581	93
1977–8[2]	738	3	46	787	4	243	263	—	510	45	1	46	574	116
1978–9[2]	736	—	73	809									613	125
1979–0[2]	791	—	70	861									647	141
1980–1[2]	875	—	66	941									715	160
1981–2														

[1] Preliminary. [2] Forecast. *Source: Economic Research Service, U.S.D.A.*

Crude Corn Oil Production in the United States In Millions of Pounds

Crop Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Total
1968–9	41.4	39.5	37.8	38.0	36.1	39.5	40.0	39.5	40.1	37.5	38.5	39.2	467
1969–0	41.2	37.9	38.0	36.9	38.6	43.9	42.1	44.5	41.3	38.5	37.4	34.0	474
1970–1	42.0	40.1	34.7	38.0	37.3	43.7	41.4	41.0	42.7	42.4	40.1	42.0	405
1971–2	42.4	40.7	33.4	38.7	38.7	43.5	40.0	46.1	45.7	43.3	43.5	43.2	499
1972–3	44.1	40.3	40.1	42.6	41.7	46.3	40.6	47.5	45.9	45.8	44.3	43.8	523
1973–4	45.2	42.4	43.1	45.1	41.8	45.4	46.5	46.8	43.8	40.5	44.0	43.0	528
1974–5	41.2	40.1	40.1	37.0	34.6	38.6	37.6	40.6	38.9	40.5	35.2	40.3	465
1975–6	39.8	40.3	35.4	55.2	53.8	55.1	59.5	61.7	59.1	58.9	65.8	59.6	644
1976–7[1]	62.0	50.4	51.3	48.1	49.0	59.2	55.6	58.1	57.9	64.0	59.3	53.7	668.6
1977–8[1]	58.9	58.0	50.1	54.9	51.6	58.7	57.1	68.0	64.7	60.5	59.7	63.8	695.5
1978–9[1]	65.4	59.8	55.8	47.6	54.9	69.4	67.4	69.7	60.6	61.5	63.9	60.3	736.3
1979–0[1]	61.8	63.3	63.0	62.3	60.0	70.7	64.3	68.3	65.1	66.2	69.9	76.2	791.1
1980–1[1]	80.6	68.0	59.0	65.8	63.6	76.2							
1981–2													

[1] Preliminary. *Source: Economic Research Service, U.S.D.A.*

Corn Oil Spot Price, Crude, F.O.B. Midwest Mills (Tank Cars) In Cents Per Pound

Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Average
1968–9	14.8	15.6	15.9	16.9	16.6	14.6	13.1	12.7	12.6	12.9	12.7	12.6	14.2
1969–0	13.7	14.9	15.2	15.5	16.4	15.5	14.8	15.3	15.0	14.8	15.5	16.0	15.2
1970–1	17.8	19.5	21.5	22.5	27.5	21.0	17.0	18.8	19.5	19.3	18.9	17.8	20.1
1971–2	17.8	19.0	18.0	18.0	17.3	17.3	17.0	17.5	16.3	15.0	14.5	15.3	16.9
1972–3	16.0	15.8	16.5	17.8	17.3	17.8	17.5	19.0	21.0	20.8	35.0	23.0	19.8
1973–4	24.0	25.5	32.0	39.0	45.0	39.5	33.0	38.5	38.0	38.0	47.5	38.0	36.5
1974–5	45.0	45.0	42.0	44.0	40.5	39.0	37.0	27.0	26.5	29.5	31.0	28.0	36.2
1975–6	29.0	28.5	28.5	32.5	28.5	26.5	23.3	19.8	22.0	26.0	23.5	27.0	26.3
1976–7[1]	27.1	27.5	26.0	28.0	36.0	36.0	34.5	35.5	31.0	27.5	23.5	23.2	29.7
1977–8[1]	26.5	31.5	35.0	40.0	44.0	43.0	36.5	35.3	33.0	33.3	31.5	35.5	35.4
1978–9[1]	34.0	35.0	31.0	35.0	34.0	33.3	32.1	33.0	30.0	31.0	32.3	32.5	32.8
1979–0[1]	32.8	29.9	33.3	27.5	29.0	26.0	20.0	23.0	22.0	27.3	29.8	28.0	27.4
1980–1[1]	28.0	27.5	28.0										
1981–2													

[1] Preliminary. *Source: Economic Research Service, U.S.D.A.*

Cotton

The 1980 U.S. cotton crop totaled 11.1 million bales, 24 percent below the previous season's output. Producers harvested 13.0 million acres of the 14.6 million planted, indicating an abandonment of nearly 11 percent. The high rate of abandonment reflected the adverse growing conditions (hot and dry weather) in the Southwest and other parts of the Cotton Belt. The average yield of 411 pounds per harvested acre was nearly 25 percent below the previous season's record-high yield of 547 pounds.

U.S. cotton production represented 17 percent of estimated world cotton production in 1980/81, off from 22 percent in the previous season. The total supply of U.S. cotton for the 1980/81 season ending July 31, 1981 amounted to 14.2 million bales, compared with 18.6 million for the 1979/80 season.

Despite the sharp reduction in the U.S. cotton crop, world cotton production in the 1980/81 season was estimated to be only slightly below the previous season's production, primarily because of increases in the Soviet and the Chinese cotton crops.

U.S. textile mills were expected to consume in 1980/81 about 10 percent fewer bales than in the previous season, reflecting the slowed rate of growth in the economy and textile inventory adjustments by mills. However, the use of cotton in denim, which is cotton's largest single domestic market, increased to 1.2 million bales in 1980 from just above 1.0 million in 1979. Mill-owned inventories of denim at the end of December, 1980 were up 60 percent from the beginning of the year, and some production cutbacks to control inventories were reported later.

Cotton's share of the U.S. fiber market increased to 26 percent in 1980 from 24 percent in 1979. Cotton's share of the market tends to rise in periods of depressed economic activity. Fiber end-uses containing little or no cotton, such as tire cord, carpets, and industrial fabrics are products which the consumer can postpone purchasing when a loss of income occurs or is threatened. High interest rates also curtailed activity in these markets. In contrast, most cotton use is in items of apparel in which style is not essential and whose consumption is not as sensitive to changes in consumer income.

The gap between cotton and manmade fiber prices in the U.S. averaged about 14 cents per pound during calendar 1980, and by December, mills were paying 17 cents more for cotton than for polyester staple. This gap was narrowed to about 10 cents per pound in January, 1981 reflecting a 9 percent increase in polyester staple prices with mills paying about 95 cents a pound for cotton compared to a reported 85 cents a pound for polyester.

World cotton exports in the 1980/81 season were expected to be about 13 percent below the previous season's record 23 million bales, reflecting larger available supplies relative to consumption and smaller U.S. supplies. Also, some countries were expected to consume partially out of stocks.

Among the major cotton exporting countries, the U.S. was expected to absorb most of the projected reduction in cotton exports, as low exportable U.S. supplies and consequent high U.S. cotton prices relative to foreign cotton prices caused importers to look elsewhere to fill their needs. U.S. cotton exports were expected to drop 38 percent from the previous season's 9.2 million bale total, which was the largest in 50 years. (In 1979/80, the U.S. accounted for 40 percent of world exports, primarily because of strong demand from China, which replaced Japan as the leading market. In that season, U.S. cotton shipments to China totaled 2.3 million bales, representing nearly 25 percent of total U.S. exports.) China was expected to be the largest U.S. export market again in 1980/81, but the U.S. share of world exports was projected to drop to 28 percent of the total.

World cotton stocks at the end of the 1980/81 season were projected by the USDA in mid-March 1981 at 21.3 million bales compared with 21.5 million bales at the end of the 1979/80 season.

U.S. Government Activities

The USDA announced on October 31, 1980 that the 1981 loan rate for the basic grade of upland cotton (Strict Low Middling 1-1/16 inch, with a micronaire of 3.5 through 4.9, net weight, at average U.S. location) would be 52.46 cents per pound, 4.46 cents above the 1980 level. On December 15, 1980, the USDA announced that there would be no set-aside, voluntary diversion or normal crop acreage requirements under the upland cotton program.

Average cotton prices in September, 1980 triggered the special upland import quota provision of the Food

World Production of Cotton In Thousands of Bales[3]

Year Begin. Aug. 1	Argentina	Brazil	China	Egypt	India	Iran	Mexico	Pakistan	Israel	Sudan	Colombia	Turkey	United States	U.S.S.R.	World Total
1970–1	390	2,740	9,200	2,346	4,400	710	1,440	2,502	163	1,130	540	1,845	10,269	10,800	54,396
1971–2	400	3,135	10,200	2,351	5,800	680	1,715	3,263	169	1,125	590	2,420	10,270	11,000	59,759
1972–3	575	3,000	9,800	2,369	5,370	965	1,780	3,237	186	920	630	2,505	13,890	11,100	63,272
1973–4	585	2,465	11,700	2,258	5,530	920	1,500	3,037	173	1,090	620	2,365	13,300	11,100	63,662
1974–5	790	2,440	11,500	2,018	5,950	1,095	2,230	2,925	230	1,015	700	2,760	11,525	12,250	64,717
1975–6	645	1,825	10,700	1,762	5,350	640	910	2,370	225	500	560	2,215	8,500	11,730	54,451
1976–7	740	2,550	10,000	1,828	4,950	720	1,045	2,006	247	735	685	2,190	10,650	12,050	57,653
1977–8	1,015	2,200	9,450	1,840	5,680	820	1,627	2,651	295	915	645	2,650	14,525	12,700	64,406
1978–9	800	2,650	10,000	2,022	6,220	610	1,570	2,183	365	640	375	2,200	10,885	12,000	59,948
1979–0[1]	740	2,625	10,200	2,230	6,300	460	1,515	3,470	347	525	575	2,200	14,820	13,000	66,040
1980–1[2]	800	2,550	11,000	2,385	6,200	365	1,550	3,100	360	650	500	2,200	11,000	14,000	64,011

[1] Preliminary. [2] Estimate. [3] U.S. is in running bales (500 lbs.); all others are 478 pound net weight bales.
Source: International Cotton Advisory Committee

and Agriculture Act of 1977. The additional quota of nearly 500,000 bales was effective for 90 days following its publication in the Federal Register, but a total of only 11,000 bales was actually imported.

Preliminary calculations indicated a 1981 target price of around 70 to 72 cents a pound. For 1980-crop cotton, no deficiency payments were made because the average price received by farmers of 73.3 cents per pound was above the 58.4 cent target price.

Futures Markets

Cotton futures are traded on the New York Cotton Exchange, and trading in a short staple cotton contract was expected to be initiated on the New Orleans Commodities Exchange in 1981. A short staple cotton contract is also traded in Hong Kong.

Supply and Distribution of All Cotton in the United States In Thousands of (480-Lb. Net Weight) Bales

Crop Year Beginning Aug. 1	Supply												Distribution		
	Carryover, Aug. 1						Ginnings								
	Privately Owned														
	At Mills	In Public Storage	Elsewhere	Total	CCC Held	Total Stocks	Current Crop[2] Less Ginnings	New Crop[3]	Total[4]	Imports	City Crop	Total	Mill Consumption	Exports	Total
1970–1	1,423	947	360	2,730	3,030	5,760	10,106	127	10,233	37	77	16,107	8,204	3,897	12,101
1971–2	1,641	1,908	400	3,949	303	4,252	10,107	40	10,147	72	81	14,552	8,259	3,385	11,644
1972–3	1,540	1,357	80	2,977	257	3,234	13,227	3	13,230	34	10	16,504	7,769	5,311	13,080
1973–4	1,500	1,881	350	3,731	198	3,929	12,608	145	12,753	48	20	16,750	7,472	6,123	13,595
1974–5	1,439	1,886	200	3,525	218	3,743	11,189	30	11,214	34	10	15,000	5,860	3,926	9,786
1975–6	1,132	4,074	275	4,511	970	5,481	8,151	47	8,198	92	5	13,776	7,250	3,311	10,561
1976–7	1,210	2,234	150	3,471	123	3,594	10,300	85	10,385	38	54	14,073	6,674	4,784	11,458
1977–8	1,089	1,850	–11	2,920	332	2,928	13,933	144	14,077	5	0	17,010	6,483	5,484	11,967
1978–9	1,167	3,966	214	4,057	1,269	5,347	10,405	72	10,477	4	0	15,828	6,352	6,180	12,532
1979–0[1]	966	2,711	281	3,145	637	3,282	14,190	200	14,390	6	0	18,173	6,506	9,229	15,735
1980–1[1]	955	1,822	250	3,027	342	3,369	10,824	110	10,934	15	5	14,323	5,865	5,725	11,590

[1] Preliminary. [2] Less ginnings prior to Aug. 1. [3] Ginnings prior to Aug. 1 end of season. [4] Includes inseason ginnings. *Source: Economic Research Service, U.S.D.A.*

Supply and Distribution of Cotton in Foreign Countries In Millions of Bales (480 Lb. Net)

Year Beginning Aug. 1	Foreign Non-Communist Areas							Communist Areas						
	Supply				Distribution			Supply				Distribution		
	Stocks Aug. 1	Production	Imports	Total Supply	Consumption[3]	Exports	Stocks July 31	Stocks Aug. 1	Production	Imports	Total Supply	Consumption[3]	Exports	Stocks July 31
1970–1	12.1	23.5	14.2	49.8	27.2	11.3	10.7	3.2	19.9	4.7	27.7	20.4	2.6	4.7
1971–2	10.7	28.2	13.9	52.8	28.0	12.4	12.0	6.1	21.1	4.5	31.7	22.2	2.9	6.6
1972–3	12.0	28.3	15.3	55.6	29.7	12.5	13.2	6.6	20.9	5.6	33.1	22.9	3.3	6.8
1973–4	13.2	27.5	14.7	55.4	31.1	10.0	14.1	6.8	22.8	5.4	35.0	23.9	3.5	7.7
1974–5	14.1	29.0	12.7	55.8	29.0	9.7	16.8	7.7	23.8	4.4	35.9	23.8	3.8	8.3
1975–6	16.8	23.2	15.0	55.0	31.2	11.6	12.0	8.3	22.4	4.4	35.1	22.7	4.1	8.3
1976–7	12.0	24.7	13.7	50.4	30.6	8.3	11.1	8.3	22.1	4.3	34.7	23.6	4.5	6.7
1977–8	11.1	27.5	14.8	53.4	30.2	9.4	13.5	6.7	22.2	5.2	34.1	24.3	4.3	5.5
1978–9	13.5	26.8	14.2	54.5	31.7	9.8	12.8	5.5	22.3	5.7	33.5	24.9	3.8	4.8
1979–0	12.8	27.5	15.1	55.4	32.6	9.5	13.2	4.8	23.4	7.2	35.4	25.9	3.7	5.7
1980–1[1]	13.2	28.0	14.3	55.5	32.7	9.7	13.0	5.7	24.0	7.0	36.7	26.5	4.1	6.2
1981–2[2]	13.0							6.2						

[1] Preliminary. [2] Estimate. [3] Includes destroyed & unaccounted for. *Source: Economic Research Service, U.S.D.A.*

United States Cotton Ginnings

Crop Year	Ginnings to: (In Thousands of Running Bales)													
	Aug. 1	Aug. 16	Sept. 1	Sept. 16	Oct. 1	Oct. 15	Nov. 1	Nov. 14	Dec. 1	Dec. 15	Jan. 1	Jan. 16	Feb. 1	Total Crop
1970–1	6	70	280	519	1,135	2,609	4,163	6,470	8,830	9,786	—	10,037	—	10,112
1971–2	123	216	365	475	879	2,587	4,604	6,572	7,895	8,186	—	9,723	—	10,229
1972–3	40	N.A.	521	784	1,821	4,439	6,845	8,242	9,308	10,442	11,603	11,879	12,269	13,269
1973–4	3	N.A.	135	246	496	1,826	5,014	7,070	9,197	10,712	11,601	12,023	12,373	12,611
1974–5	145	N.A.	543	626	827	2,315	4,944	6,509	8,291	9,687	10,598	10,899	11,195	11,328
1975–6	30	N.A.	169	228	373	1,060	2,767	4,169	5,794	7,013	7,603	7,877	8,055	8,151
1976–7	47	N.A.	374	443	573	1,564	3,703	5,951	7,658	9,125	9,887	10,110	10,251	10,347
1977–8	85	N.A.	694	1,169	2,353	4,343	7,493	9,723	11,711	12,963	13,513	13,742	13,859	14,018
1978–9	144	N.A.	672	788	1,490	2,904	4,659	5,890	6,668	8,096	9,317	9,723	10,049	10,549
1979–0	72	N.A.	538	697	916	2,105	4,799	7,287	9,937	11,772	12,728	13,439	13,832	14,262
1980–1[1]	200	N.A.	581	748	1,311	2,572	4,603	6,711	7,843	8,809	9,925	10,436	10,683	10,824

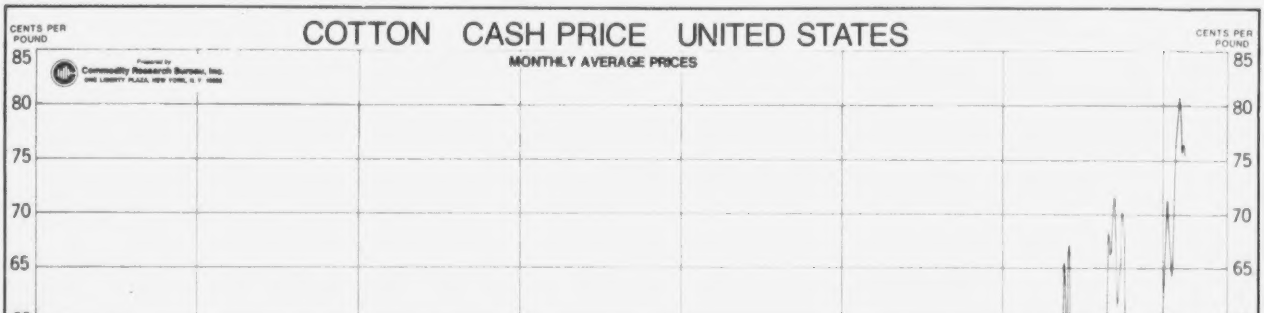
[1] Preliminary. *Source: Bureau of Census*

COTTON

Average Spot Cotton Prices,[2] C.I.F. Northern Europe In Cents Per Pound (Equivalent U.S. ¢/Lb.)

	M 1"		SM 11/16"									SM 1⅛"	
Year	U.S.	Pakistan 289F	Guatemala	U.S.	Greece	Mexico	Nicaragua	Syria	U.S.S.R. Pervyi 31/32 MM	Iran	Turkey (12 MIR)	U.S.	Uganda BP52
1968	28.22	28.28		33.07		30.89	29.40	32.29	32.46	32.00	31.14	34.85	37.74
1969	25.53	27.09		28.47		28.45	26.70	29.21	20.39	28.52	27.88	29.97	33.55
1970	27.46	29.60		29.68		30.71	28.45	29.26	32.47	29.20	28.35	31.32	33.15
1971	32.64	33.25		34.21		35.46	33.68	34.30	35.06	34.47	33.62	35.37	39.49
1972	34.66	32.63		36.55		37.52	35.34	37.82	37.01	37.66	37.05	37.44	39.89
1973	56.43	52.05		64.91	82.11	52.51	60.21	63.90	64.15	62.31	62.56	66.28	75.66
1974	58.91	51.52		66.69	58.66	66.16	61.06	74.06	66.71	67.60	69.54	68.17	79.84
1975	44.34	42.06		59.65	67.93	55.59	51.19	55.87	53.21	53.82	54.01	61.28	67.55
1976	77.74	N.Q.	79.14	79.88	87.24	79.26	77.12	78.15	78.11	78.50	77.68	78.98	91.73
1977	65.81	59.50	64.72	72.31	70.04	73.87	68.74	74.25	70.60	72.02	76.53	75.27	102.25
1978	63.23		75.23	72.52	83.09	72.94	70.21	72.08	72.55	75.10	73.46	77.99	N.Q.
1979	67.99	75.41	83.63	77.22	84.00	77.43	73.97	81.08	78.73	80.77	82.53	82.16	N.A.
1980[1]				97.97		94.20	91.41	96.00	92.77	N.Q.	95.47		
Jan. '81				105.38		99.50	97.81	101.75	97.88	N.Q.	101.81		
Feb. '81													
Mar. '81													
Apr. '81													
May '81													

[1] Preliminary. [2] Generally for prompt shipment. *Source: Foreign Agricultural Service, U.S.D.A.*



World Consumption[3] of All Cottons in Specified Countries In Thousands of Bales (478 Pounds Net[2])

Yr. Beg. Aug. 1	Argentina	Brazil	China	East. Europe	France	W. Germany	India	Italy	Japan	Mexico	Pakistan	Un. Kingdom	United States	U.S.S.R.	World Total
1968–9	475	1,330	8,700	2,590	1,123	1,177	5,370	1,021	3,476	685	1,775	816	8,242	7,900	54,471
1969–0	477	1,350	8,700	2,627	1,143	1,170	5,520	1,021	3,392	685	2,120	792	7,991	8,100	55,921
1970–1	492	1,380	9,300	2,707	1,095	1,078	5,200	925	3,541	675	1,985	741	8,068	8,400	56,230
1971–2	517	1,500	10,600	2,745	1,085	1,109	5,500	924	3,614	750	2,020	638	8,039	8,500	58,580
1972–3	472	1,700	11,300	2,755	1,064	1,074	5,700	862	3,724	800	2,485	650	7,800	8,500	60,441
1973–4	520	1,750	12,000	2,770	1,077	1,096	5,865	898	3,650	830	2,485	560	7,500	8,600	62,176
1974–5	515	1,800	11,800	2,700	932	962	5,785	828	2,900	820	2,020	510	5,885	8,700	58,447
1975–6	540	1,950	10,700	2,742	935	1,022	6,100	901	3,250	835	2,150	494	7,300	8,750	61,233
1976–7	540	2,000	11,400	2,752	961	966	5,500	923	3,150	760	1,800	491	6,072	8,750	60,741
1977–8	480	2,260	12,100	2,782	850	810	5,320	841	3,000	740	1,900	415	6,514	8,800	60,877
1978–9	505	2,450	12,900	2,815	825	780	5,650	979	3,300	760	2,000	449	6,374	8,900	63,483
1979–0[1]	470	2,650	13,600	2,900	850	800	5,900	1,050	3,400	760	2,050	402	6,553	9,000	66,000
1980–1[4]	485	2,750	13,800	2,850	800	800	6,100	1,000	3,100	775	2,070	250	6,000	9,050	65,500
1981–2															

[1] Preliminary. [2] Except for the U.S. which are in running bales. [3] Includes estimates for hand spinning in some countries. Excludes cotton burned or otherwise destroyed. [4] Estimate. *Source: International Cotton Advisory Committee*

Cotton Government Loan Program in the United States

Crop Yr. Beginning Aug.	Acreage		Loan Rate		Supply & Distribution of Gov't Controlled Cotton									
	Allotments	Harvested	Avg. at Spot[2] Mkts.	Target Price	Stocks—Aug. 1				Loan Entries	Gov't. Purchases	Total Supply	Gov't. Cotton Released	Loan Cotton Repossessed	Total Distribution
					Gov't. Owned	Pooled	Loan	Total Stock						
	Thousand Acres		¢ Per Lb.		In Thousands of Running Bales									
1968–9	16,271	10,159	20.34	—	207	—	—	207	4,443	—	4,650	81	1,658	1,739
1969–0	16,280	11,051	20.34	—	2,911	—	—	2,911	3,707	—	6,618	801	2,638	3,439
1970–1	17,228	11,155	20.37	—	3,035	—	—	3,035	2,411	—	5,446	2,734	2,399	5,133
1971–2	11,618	11,471	19.70	—	313	—	—	313	1,250	—	1,563	288	1,006	1,294
1972–3	11,618	12,984	19.71	—	25	—	244	269	1,945	—	2,214	24	2,006	2,030
1973–4	10,118	11,970	20.65	—	1	—	183	184	1,757	—	1,941	1	1,689	1,690
1974–5	11,118	12,547	27.06	38.00	—	—	251	251	2,465	—	2,716	0	1,677	1,677
1975–6	11,097	8,796	36.12	38.00	—	—	970	970	701	—	1,671	0	1,548	1,548
1976–7	11,084	10,914	38.92	43.20	—	—	123	123	952	—	1,075	—	743	743
1977–8	11,120	13,275	44.63	47.80	—	—	332	332	4,565	—	4,897	—	3,628	3,628
1978–9	10,340	12,400	48.00	52.00	—	—	1,269	1,269	1,560	—	2,829	—	2,191	2,191
1979–0[1]	10,749	12,831	50.23	57.70	—	—	637	637	1,759	—	2,396	—	1,853	1,853
1980–1[3]	None	12,989	48.00	58.40	—	—	542	542	2,500	—	3,042	—	1,400	1,400
1981–2[3]	None		52.46											

[1] Preliminary. [2] Strict low middling, 1¹⁄₁₆" at 10 markets. [3] Estimate. [4] Early forfeitures. *Source: Department of Agriculture*

United States Government Crop Forecasts and Actual Cotton Crops

Year	Forecasts of Production (1,000 Bales of 480 Lbs.[1]					Actual Crop	Forecasts of Yields (In Lbs. Per Harv. Acre)					Actual Yield
	Aug. 1	Sept.1	Oct. 1	Nov. 1	Dec. 1		Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1	
1968	10,976	11,197	11,071	10,912	10,822	10,926	511	521	515	508	511	516
1969	11,779	11,088	10,528	10,036	10,080	9,990	504	474	450	429	436	434
1970	11,079	10,752	10,618	10,429	10,270	10,192	470	456	450	442	441	438
1971	10,932	10,952	10,701	10,719	10,548	10,477	452	453	443	444	442	438
1972	13,343	13,582	13,670	13,955	13,469	13,704	487	494	498	504	487	507
1973	12,740	12,939	13,123	13,189	12,961	12,974	493	502	509	512	519	520
1974	12,758	13,200	12,813	12,053	11,702	11,540	470	470	470	443	443	442
1975	9,416	9,309	9,059	9,034	8,476	8,302	484	479	467	466	437	453
1976	10,734	10,375	10,251	9,891	10,264	10,581	466	451	445	435	451	465
1977	13,535	13,302	13,317	13,832	14,496	14,389	506	495	500	503	525	520
1978	11,820	11,155	10,873	10,981	10,841	10,856	462	425	429	418	421	420
1979	13,710	14,245	14,356	14,544	14,527	14,629	497	525	528	535	534	547
1980	12,812	11,689	11,589	11,224	11,125		461	421	419	408	411	
1981												

[1] Net Weight bales. Data prior to 1969 are in 500-lb. gross weight bales. *Source: Crop Reporting Board, U.S.D.A.*

COTTON

Production of Cotton (Lint) & American-Pima in the United States
In Thousands of 480 Pound Net Weight Bales

Year	Alabama	Arizona	Arkansas	California	Georgia	Louisiana	Mississippi	Missouri	No. Car.	Oklahoma	So. Car.	Tennessee	Texas	New Mexico	Total Amer. Pima
1968	396	688	1,025	1,569	265	544	1,519	196	122	264	250	324	3,499		78.9
1969	460	595	1,137	1,312	282	482	1,319	325	99	279	205	421	2,831		77.4
1970	507	462	1,048	1,160	292	521	1,631	224	155	193	211	392	3,191		57.3
1971	640	466	1,240	1,117	374	600	1,693	401	135	177	275	528	2,579		98.1
1972	567	603	1,435	1,765	354	705	2,007	439	119	332	308	548	4,246		95.8
1973	449	611	1,041	1,749	390	521	1,816	180	164	427	290	432	4,673		78.1
1974	522	995	880	2,595	419	560	1.595	230	133	310	274	308	2,462	161	90.2
1975	312	573	687	1,954	148	346	1,040	196	46	170	98	222	2,382	72	54.5
1976	349	834	776	2,482	199	553	1,151	165	72	175	145	228	3,307	76	64.0
1977	277	1,070	1,035	2,790	82	656	1,645	235	53	436	109	255	5,465	173	112.2
1978	291	1,068	660	1,940	111	478	1,378	188	45	355	115	235	3,792	101	93.4
1979	324	1,280	606	3,468	152	690	1,437	157	43	522	116	171	5,515	104	98.6
1980[1]	275	1,345	450	3,150	86	455	1,150	178	51	216	76	200	3,280	105	98.3
1981															

[1] Preliminary, December estimate. *Source: Crop Reporting Board, U.S.D.A.*

Aver. Spot Price of U.S. Cotton, $1\frac{1}{16}$ inches[1]—Strict Low Middling at Designated Markets
In Cents Per Pound

Yr. Begin. Aug. 1	Atlanta	Augusta	Charleston	Dallas	Fresno	Galveston	Greenville	Greenwood	Houston	Little Rock	Lubbock	Memphis	Montgomery	Phoenix	Average
1968–9	23.56	23.60	—	22.34	22.25	—	23.55	23.04	22.50	23.19	22.28	23.09	23.55	21.95	22.90
1969–0	22.54	22.93	—	21.93	21.52	—	22.70	22.11	21.93	22.13	21.91	22.28	22.37	21.43	22.15
1970–1	23.84	24.25	—	23.29	22.91	—	24.02	23.68	23.40	23.63	23.28	23.78	23.83	22.72	23.55
1971–2	32.00	32.19	—	31.09	30.68	—	31.80	31.65	31.41	31.40	31.34	31.72	31.96	30.97	31.52
1972–3	35.04	35.02	—	31.31	32.19	—	33.38	33.37	31.38	33.75	32.40	32.45	35.30	32.33	33.14
1973–4[1]	68.63	68.63	—	63.75	71.54	—	66.06	68.06	64.57	—	61.87	68.01	68.44	66.26	67.10
1974–5	—	43.63	—	40.31	42.53	—	42.80	42.20	41.70	—	38.90	41.86	42.45	40.52	41.69
1975–6	—	60.22	—	55.84	58.72	—	59.19	58.54	57.65	—	55.06	58.48	58.93	57.20	57.99
1976–7	—	72.70	—	69.43	71.93	—	71.85	71.21	70.94	—	67.79	71.28	71.54	70.12	70.88
1977–8	—	53.81	—	50.53	56.67	—	53.33	52.75	51.58	—	50.04	52.75	53.24	52.71	52.74
1978–9	—	62.50	—	58.33	67.66	—	62.09	61.84	59.45	—	58.27	61.68	61.92	61.98	61.58
1979–0	—	73.92	—	66.91	73.76	—	73.24	72.73	—	—	66.43	72.55	72.57	71.98	71.48
1980–1															

[1] Prior to 1973, prices are for 1 inch middling. *Source: Agricultural Marketing Service, U.S.D.A.*

Gross Entries of Cotton into U.S. Government Loan Program In Thousands of Running Bales

Crop Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April	May[1]	June[1]	July[1]	Seasonal Total
1968–9	[2]	24	150	696	1,393	1,399	410	171	107	62	31	0	4,443
1969–0	39	74	475	1,084	936	893	140	40	17	7	2	[2]	3,707
1970–1	0	38	158	592	859	697	44	14	7	1	1	[2]	2,411
1971–2	37	13	38	336	285	388	124	23	1	1	2	[2]	1,250
1972–3	0	40	208	364	495	552	148	103	25	6	3	0	1,945
1973–4	0	15	137	479	589	380	96	40	12	5	4	0	1,757
1974–5	0	13	134	356	544	753	294	99	162	63	47	1	2,465
1975–6	0	1	8	80	195	298	94	15	6	5	[2]	0	701
1976–7	0	0	[2]	3	160	123	67	11	412	174	2	[2]	952
1977–8	[2]	31	214	802	1,531	1,544	310	72	30	13	18	[2]	4,564
1978–9	0	5	26	89	215	584	352	189	68	16	14	[2]	1,560
1979–0	0	[2]	23	294	319	600	316	110	51	35	8	[2]	1,759
1980–1	0	[2]	8	253	528	912	343						
1981–2													

NOTE: Seasonal totals are net, due to allowances for rejections. [1] Entries after April 30 represent late reporting. [2] Less than one thousand bales. *Sources: N.Y. Cotton Exchange; Commodity Credit Corporation*

U.S. Upland Cotton—Ginnings, by Staple Length In Thousands of Bales

Crop Year	7/8" & Shorter	29/32"	15/16"	31/32"	1"	1 1/32"	1 1/16"	1 3/32"	1 1/8"	1 5/32" & Longer	Total
1968–9	8.7	117.5	763.0	745.9	784.1	923.0	2,814.3	2,862.4	1,492.3	327.2	10,838.4
1969–0	140.5	416.1	628.9	498.9	552.4	1,037.3	3,050.2	2,849.7	527.1	165.5	9,867
1970–1	37.1	350.1	1,045.8	588.1	524.4	1,016.4	3,771.7	2,001.7	612.1	107.9	10,055
1971–2	69.9	335.5	917.0	491.8	290.6	530.3	2,612.3	3,320.3	1,449.6	116.8	10,134
1972–3	11.6	156.8	802.0	1,187.7	1,145.6	1,318.4	4,694.0	2,859.1	913.9	84.5	13,174
1973–4	33.5	242.3	1,207.9	1,534.9	1,103.6	841.3	3,629.5	3,180.5	724.4	35.0	12,533
1974–5	12.3	70.3	424.0	683.8	594.4	531.7	2,543.3	4,965.9	1,316.3	97.8	11,240
1975–6	71.1	289.0	620.5	693.9	514.9	390.2	1,546.5	2,948.9	995.2	27.5	8,098
1976–7	9.2	77.4	570.3	980.2	889.7	1,060.4	2,525.5	2,952.8	1,179.9	38.7	10,284
1977–8	7.7	61.6	655.9	1,645.0	1,716.0	1,342.4	2,402.0	4,557.7	1,450.0	70.8	13,909
1978–9	9.4	89	432	877	1,335	1,090	2,497	3,113	1,017	57.8	10,459
1979–0[1]	18	83	426	1,045	1,338	1,096	1,347	4,207	2,925	118	12,651
1980–1[2]	42	133	363	633	848	816	1,545	3,217	1,979	264	9,839
1981–2											

[1] Preliminary. [2] Thru Dec. 31. *Source: Consumer & Marketing Service, U.S.D.A.*

U.S. Daily Rate of Total Cotton Mill Consumption on Cotton-System Spinning Spindles[2]
In Running Bales

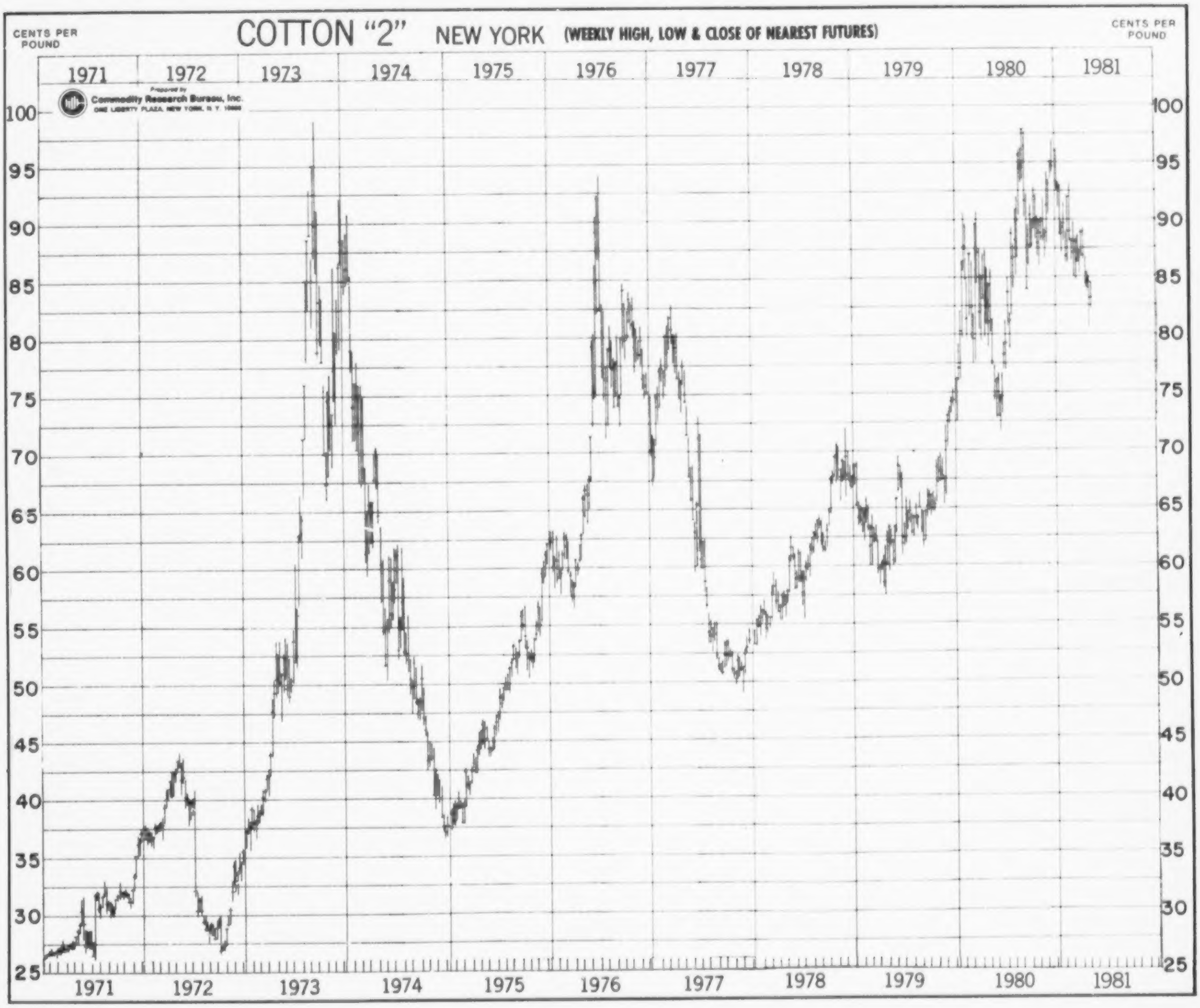
Crop Yr.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Average
1974–5	25,771	24,456	23,003	21,616	17,169	18,753	19,768	20,010	21,002	22,766	23,839	21,079	21,603
1975–6	25,273	26,569	27,325	27,481	24,977	28,478	29,937	28,478	27,110	27,592	27,668	22,230	26,926
1976–7	26,203	25,052	26,392	25,072	23,298	25,475	26,392	26,131	25,359	25,369	24,635	19,730	24,926
1977–8	24,687	24,230	25,590	25,235	22,476	24,629	25,042	24,790	24,213	24,173	22,984	19,169	23,935
1978–9[1]	22,941	22,780	24,090	23,809	21,735	24,114	23,567	25,306	23,358	24,193	24,454	20,127	23,373
1979–0[1]	23,617	24,117	25,188	24,099	21,813	24,160	25,353	25,654	24,899	24,781	23,883	18,473	23,836
1980–1[1]	22,130	22,816	23,884	22,885	19,000	21,773	22,084						
1981–2													

[1] Preliminary. [2] Not seasonally adjusted. *Source: Bureau of the Census; U.S.D.C.*

Average Wholesale Price of Cotton Yarn[1] (30/1[2], Combed, Knitting) on Cones In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1968	108.1	108.5	107.0	106.5	104.0	104.0	104.0	103.9	103.7	103.2	103.2	103.2	104.9
1969	103.2	103.2	103.2	102.7	102.7	102.4	102.4	102.4	102.7	102.7	102.4	102.4	102.7
1970	102.1	102.1	101.4	100.8	100.8	100.5	100.1	100.1	100.1	100.3	100.5	101.1	100.8
1971	101.4	102.3	103.6	105.4	105.9	106.6	106.8	107.8	108.2	108.2	108.2	108.8	106.1
1972	109.6	110.7	110.7	111.5	112.1	112.3	112.3	112.1	111.7	110.7	110.3	110.5	110.5
1973[2]	85.4	86.4	88.9	91.0	97.2	100.0	98.8	106.2	108.2	108.8	112.5	116.8	100.0
1974	123.3	123.3	125.0	123.3	125.6	122.7	128.1	122.5	118.5	115.4	114.9	110.5	121.1
1975	106.3	102.9	101.4	101.4	102.7	103.9	105.1	106.3	112.5	117.1	120.5	122.0	108.5
1976	127.2	128.4	128.9	128.4	132.3	139.4	145.8	149.0	148.7	147.5	148.7	147.5	139.3
1977	145.1	144.3	146.3	147.5	148.7	147.3	146.5	142.6	156.5	153.9	153.2	153.9	148.8
1978	153.2	155.2	157.5	158.1	160.1	162.7	163.7	163.7	163.7	165.0	165.0	165.6	161.1
1979	165.6	166.3	165.6	165.6	165.9	166.9	166.9	167.3	167.9	169.9	172.8	176.3	168.1
1980	180.6	198.3	200.0	203.0	204.6	202.7	203.3	206.3	206.3	207.6	210.6	211.6	202.9
1981	212.9	214.6											

[1] Natural stock, f.o.b. mill. [2] Data prior to 1973 are for 36/2. *Source: Bureau of Labor Statistics* (0326-0101.05)



High, Low & Closing Prices of May Cotton Futures at New York In Cents per Pound

Year of Delivery	Year Prior to Delivery										Delivery Year					Life of Delivery Range
	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	
1978 High	72.60	71.30	70.00	66.90	64.75	57.25	56.15	55.35	53.70	55.33	57.60	58.19	59.50	57.88	58.70	72.60
Low	69.75	66.27	66.00	60.20	57.50	54.60	53.50	52.30	51.28	51.41	54.25	55.10	56.00	55.35	56.75	51.28
Close	70.60	69.30	66.25	60.75	57.60	56.25	54.70	52.80	52.52	54.41	56.82	56.98	56.07	57.00	58.70	—
1979 High	63.40	63.65	67.15	66.50	66.22	69.00	69.20	75.70	75.05	73.85	70.90	68.15	64.45	61.70	62.95	75.70
Low	61.00	61.50	63.20	63.00	63.00	65.35	66.85	68.80	70.72	68.65	65.50	63.90	59.20	57.50	59.45	54.95
Close	62.35	63.35	65.25	64.90	66.35	68.35	69.00	73.85	73.67	69.66	65.82	64.17	59.67	61.50	60.47	—
1980 High	67.90	65.70	66.40	68.25	67.00	70.00	69.00	68.90	73.00	76.40	86.00	90.42	90.70	87.40	84.40	90.70
Low	66.00	64.10	63.00	63.90	64.55	65.90	66.25	66.40	68.20	70.82	73.97	80.70	77.52	79.50	80.90	64.15
Close	65.65	65.45	64.15	65.60	66.05	69.20	67.70	68.22	71.77	75.95	85.37	86.77	85.12	81.99	83.75	—
1981 High	80.60	77.60	78.42	75.00	85.70	94.50	96.87	93.50	93.12	97.67	96.50	93.70	89.80	89.20		
Low	74.50	74.30	74.92	72.80	75.50	81.65	87.00	88.20	86.70	88.40	88.35	86.00	84.75	83.75		
Close	77.00	75.05	75.00	74.80	84.80	93.92	90.40	90.20	92.08	95.60	90.90	90.14	86.12	84.00		
1982 High	84.90	85.35														
Low	82.75	83.20														
Close	84.20	83.26														

Source: N.Y. Cotton Exchange

Month End Open Interest of Cotton Futures at New York In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	27,493	25,289	29,942	29,780	37,143	31,736	30,252	33,901	33,574	37,272	35,537	37,283
1979	35,702	37,809	39,058	35,174	37,391	41,908	33,897	39,343	34,326	41,717	39,684	43,981
1980	54,046	57,891	44,363	38,596	31,753	27,276	39,711	46,814	49,370	45,433	40,208	38,022
1981	32,078	34,782	25,882	24,108								
1982												

Source: N.Y. Cotton Exchange

Volume of Trading of Cotton Futures at New York In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	75,314	76,546	92,494	75,240	96,764	117,272	64,924	98,652	94,758	120,670	146,217	96,250	1,155,101
1979	118,361	142,088	139,547	122,110	131,245	191,763	102,928	115,842	114,684	135,924	207,659	159,349	1,689,051
1980	286,058	278,901	290,133	206,682	191,067	128,393	175,619	188,542	224,323	186,615	173,981	173,133	2,523,447
1981	156,303	166,292	150,297	117,653									
1982													

Source: N.Y. Cotton Exchange

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COTTON

Avg. Price[1] Received by Farmers for Upland Cotton in the U.S. In Cents Per Pound

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Average[1]
1968–9	25.99	26.24	26.51	24.16	21.55	19.37	19.70	20.57	20.68	20.12	21.32	21.65	22.02
1969–0	20.51	19.39	21.70	21.36	19.95	19.09	20.73	21.14	21.61	22.12	22.14	22.47	20.94
1970–1	22.65	21.86	22.77	22.09	20.92	21.11	21.76	22.51	23.09	22.92	23.11	22.78	21.86
1971–2[2]	26.00	26.12	27.04	27.95	28.37	29.45	30.16	27.60	30.75	31.71	31.29	30.86	28.07
1972–3	30.67	26.69	26.67	27.45	25.21	22.39	22.78	26.38	27.06	30.25	29.52	30.38	27.30
1973–4	37.46	38.20	38.00	39.50	47.60	50.60	52.00	53.40	54.9	49.2	51.5	49.4	44.4
1974–5	53.6	54.9	51.4	50.4	43.8	37.0	32.6	33.5	35.4	36.5	38.9	40.6	42.7
1975–6	43.5	47.2	49.9	49.7	49.6	50.5	51.7	52.7	53.9	57.5	66.9	68.8	51.1
1976–7	59.7	62.4	63.2	65.9	63.7	62.7	64.8	70.1	68.3	66.8	59.8	61.7	63.8
1977–8	58.3	59.1	53.6	52.1	48.7	49.1	51.4	51.1	52.2	53.7	54.8	56.5	52.1
1978–9	57.4	56.2	59.6	61.1	59.0	57.0	55.6	53.5	54.7	56.0	58.8	61.9	58.1
1979–0	59.2	57.3	61.3	61.0	59.9	61.6	66.5	64.8	63.3	66.8	62.8	74.9	63.1
1980–1	80.1	81.4	75.3	77.6	80.9	76.9	71.4	72.3	75.4				
1981–2													

[1] Weighted average by sales. [2] Beginning Aug. 1971 basis for cotton prices was changed from 500 pound gross weight to a 480 pound net weight bale. *Source: Crop Reporting Board, U.S.D.A.*

Consumption of American and Foreign Cotton in the United States In Thousands of Bales[1]

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Total
1968–9	665	643	813	658	577	806	647	664	792	656	644	649	8,215
1969–0	629	634	810	646	717	635	626	780	616	609	730	532	7,965
1970–1	593	760	632	641	722	644	665	815	637	646	797	515	8,068
1971–2	637	771	633	642	727	632	649	808	620	627	772	493	8,010
1972–3	587	715	593	739	544	747	597	601	719	579	575	573	7,569
1973–4	567	543	706	564	509	712	592	587	679	563	546	582	7,150
1974–5	515	489	575	432	343	469	395	400	525	455	477	527	5,602
1975–6	505	531	683	550	624	570	559	712	542	552	692	445	6,965
1976–7	524	626	528	501	582	510	528	653	507	507	616	395	6,477
1977–8[2]	492	606	512	505	562	493	506	620	484	484	575	383	6,222
1978–9[2]	459	569	482	595	435	603	468	506	584	484	489	503	6,177
1979–0[2]	472	482	630	482	436	604	507	513	622	496	478	487	6,209
1980–1[2]	443	456	597	458	475	435							
1981–2													

[1] American cotton, running bales; foreign cotton, equivalent 500 lb. bales. [2] Preliminary. *Source: Bureau of the Census*

Exports of American Cotton from the United States to Countries of Destination
In Thousands of Running Bales

Yr. Beg. Aug. 1	Bangladesh	Canada	Hong Kong	France	W. Germany	India	Italy	Japan	Netherlands	Spain	Sweden	United Kingdom	Rep. of Korea	China	Taiwan	World Total
1968–9	—	108	195	88	31	174	62	536	19	5	51	48	447	0	259	2,731
1969–0	—	181	61	30	26	261	47	623	19	4	37	38	455	0	193	2,768
1970–1	—	292	193	60	65	210	57	841	34	19	29	95	491	0	407	3,737
1971–2	—	312	48	35	77	101	121	726	30	38	11	63	489	0	288	3,229
1972–3	122	249	193	141	177	—	172	1,039	46	107	33	87	572	0	356	5,007
1973–4	98	258	356	81	101	0	124	1,312	17	35	40	57	722	0	542	5,746
1974–5[1]	51	186	73	65	52	0	97	957	19	58	34	33	628	0	384	3,746
1975–6[1]	142	131	126	23	11	—	53	646	3	17	21	10	893	0	498	3,178
1976–7[1]	122	187	358	45	36	273	85	973	12	86	17	66	913	0	436	4,565
1977–8[1]	42	214	479	80	65	1	77	1,028	21	64	21	59	1,172	414	490	5,219
1978–9[1]	107	214	402	61	92	1	138	1,276	17	62	22	68	1,209	606	431	5,850
1979–0[1]		263	601	88	195	0	176	1,513	11	124	20	68	1,412	2,156	693	8,779
1980–1																

[1] **Preliminary.** *Source: Bureau of the Census*

Average Spot Price of Strict Low Middling,[1] $1\frac{1}{16}''$[2], Cotton at Designated U.S. Markets ¢/Lb. (Net Weight)

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Average
1969–0	21.59	21.42	21.68	21.94	22.02	22.00	22.11	22.19	22.44	22.60	22.78	22.96	22.15
1970–1	22.99	22.98	23.00	22.82	22.58	22.81	23.22	23.56	23.79	24.46	25.07	25.31	23.55
1971–2[1]	25.99	26.52	27.03	27.41	29.55	32.35	32.82	33.14	34.30	34.75	33.43	32.13	30.78
1972–3	30.22	25.60	23.26	23.85	25.72	28.05	29.38	30.89	35.31	39.23	39.47	44.06	31.25
1973–4	53.03	65.46	63.24	56.36	65.68	67.11	57.87	53.26	51.52	45.94	44.87	45.92	55.86
1974–5[2]	50.36	47.65	44.59	39.96	36.91	36.10	36.44	37.81	40.43	41.73	42.77	45.57	41.69
1975–6	48.40	50.74	50.38	50.87	55.12	57.17	56.96	55.47	57.18	62.07	72.74	78.73	57.99
1976–7	73.25	72.26	76.98	76.53	73.10	66.95	72.15	75.75	73.67	70.65	61.08	58.18	70.88
1977–8	52.54	49.30	49.06	47.98	48.42	51.05	52.89	55.01	54.72	57.59	57.35	56.99	52.74
1978–9	59.78	60.04	64.08	65.65	64.39	61.48	60.59	58.70	58.05	60.90	63.38	61.87	61.58
1979–0	62.08	62.15	62.88	63.40	66.20	72.40	80.66	79.24	79.05	78.27	72.41	79.01	71.48
1980–1	85.60	87.51	85.78	87.05	87.23	85.11	83.30						
1981–2													

[1] Prior to Aug. 1971 prices are for MIDDLING. [2] Prices prior to 1974–75 are for 1″ cotton. *Source: Department of Agriculture*

Average Spot Cotton, $1\frac{3}{32}''$, Price at Designated U.S. Markets In Cents Per Pound (Net Weight)

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Average	$1\frac{1}{32}''$	1″
1968–9	31.47	31.17	29.74	27.66	26.85	26.67	26.16	26.10	26.05	26.11	26.10	26.13	27.52	24.88	23.85
1969–0	25.75	25.54	25.55	25.58	25.38	25.28	25.36	25.35	25.52	25.64	25.80	25.99	25.57	23.49	23.07
1970–1	25.94	25.68	25.41	25.10	24.86	25.08	25.45	25.90	26.21	26.76	27.36	27.58	25.94	24.59	24.53
1971–2[1]	28.05	28.54	29.05	29.47	31.38	34.04	34.49	34.98	37.01	38.46	36.95	35.38	33.15	31.96	31.51
1972–3	33.29	28.10	25.83	27.32	29.50	32.47	33.33	35.23	40.43	45.34	46.27	52.28	35.78	33.66	33.14
1973–4	67.14	80.71	75.50	66.91	76.82	78.28	68.76	62.58	63.59	56.48	55.40	55.50	67.31	64.59	57.66
1974–5	50.58	47.87	44.81	40.18	37.11	36.30	36.64	38.01	40.60	41.90	42.94	45.74	41.89	40.02	39.08
1975–6	48.57	50.91	50.55	51.07	55.32	57.37	57.16	55.67	57.38	62.27	72.94	78.93	58.18	56.44	54.69
1976–7	73.45	72.46	77.18	76.73	73.30	67.15	72.36	75.96	73.88	70.85	61.26	68.36	71.08	69.34	67.09
1977–8	52.72	49.48	49.24	48.16	48.65	51.28	53.12	55.24	54.95	57.82	57.58	57.22	52.96	51.27	48.26
1978–9	60.01	60.27	64.31	65.94	64.68	61.77	60.88	59.03	58.44	61.30	63.79	62.26	61.89	59.92	55.24
1979–0	62.47	62.54	63.28	63.81	66.58	72.78	81.05	79.63	79.44	78.66	72.80	79.40	71.87	69.53	63.39
1980–1	86.00	87.91	86.18	87.45	87.63	85.57									
1981–2															

[1] Beginning Aug. 1971 prices are for STRICT LOW MIDDLING. *Source: Agricultural Marketing Service, U.S.D.A.*

Cotton Cloth[1] Production in the United States In Millions of Linear Yards

Year	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total Year	Year	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total Year
1968	2,034	1,942	1,718	1,782	7,476	1975	902	978	1,051	1,164	4,095
1969	1,824	1,810	1,608	1,723	6,968	1976	1,200	1,157	1,050	1,066	4,474
1970	1,656	1,561	1,468	1,562	6,246	1977[2]	1,207	1,146	982	1,023	4,356
1971	1,607	1,608	1,405	1,527	6,149	1978[2]	1,046	1,010	913	1,020	4,007
1972	1,530	1,475	1,277	1,384	5,616	1979[2]	1,033	1,018	931	927	3,858
1973	1,377	1,324	1,160	1,226	5,086	1980[2]	1,032	968	818		
1974	1,322	1,279	1,127	985	4,714	1981					

[1] Cotton broadwoven goods over 12 inches in width. [2] Preliminary. *Source: Bureau of the Census*

COTTON

Exports of American Cotton from the United States In Thousands of Running Bales

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar	Apr.	May	June	July	Total
1968–9	213	262	152	185	276	55	55	130	568	363	194	278	2,731
1969–0	147	141	167	123	176	382	325	246	308	299	269	186	2,768
1970–1	84	89	180	252	362	441	455	562	467	327	307	214	3,740
1971–2	162	310	195	272	417	337	402	437	275	163	147	110	3,227
1972–3	59	82	191	352	534	654	528	676	608	437	500	388	5,009
1973–4	329	266	259	257	592	545	598	778	638	561	496	426	5,745
1974–5	261	125	121	272	350	409	380	346	371	364	392	356	3,746
1975–6	326	258	226	177	237	214	141	381	302	328	315	276	3,179
1976–7	274	343	217	265	376	354	509	536	548	400	462	282	4,565
1977–8	181	201	149	333	496	521	502	704	640	511	528	456	5,219
1978–9	524	388	283	355	464	517	577	574	603	542	614	410	5,850
1979–0	463	428	390	630	902	737	1,025	1,150	914	911	686	540	8,776
1980–1	402	393	237	436	541								

Source: Foreign Agricultural Service, U.S.D.A.

Exports of Cotton Cloth from the U.S. to Countries of Destination In Millions of Square Yards

Year	Argentina	Canada	Central America	Other Asia	Colombia	Cuba	Other Countries	Haiti	Indonesia	Philippines	Rep. of So. Africa	Un. Kingdom	Total Exports
1968	.1	113.2	13.4		.1	0		1.5	1.7	13.3	8.5	5.0	273.1
1969	.3	128.6	14.5		.2	0		1.3	.5	12.5	7.1	5.2	299.7
1970	.3	106.9	14.0		.4	0		1.6	.6	6.6	6.1	7.7	266.6
1971	.2	136.6	9.3		.2	0		1.9	1.1	4.1	5.7	9.4	301.0
1972	[2]	149.7	12.1		.5	0	187.2	2.7	.6	3.0	7.5	15.4	378.7
1973	[2]	152.6	12.1		[2]	[2]	240.2	1.1	1.1	3.9	11.8	20.4	443.2
1974	[2]	163.4	11.4		[2]	0	272.3	1.0	.7	6.2	13.4	33.5	501.9
1975	[2]	136.2	5.5		[2]	0	265.0	1.0	.2	5.3	8.2	33.3	454.7
1976	[2]	155.7	7.3		.2	0	306.0	2.0	[2]	10.0	6.7	39.7	527.6
1977	.2	144.4	15.2		.4	2.8	229.7	2.2	[2]	6.6	4.1	37.4	443.0
1978[1]	1.3	187.9	6.0		.1	0	158.5	1.9	[2]	7.0	7.0	12.9	382.6

[1] Preliminary. [2] Less than 50,000 square yards. *Source: Bureau of the Census*

U.S. Exports of Cotton Cloth (Raw Cotton Equivalent) In Thousands of Bales (Net Weight—480 Lbs.)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1968	19.3	21.9	17.7	24.1	22.7	17.6	17.9	20.5	29.8	17.5	25.5	21.5	256.0
1969	8.0	15.4	35.3	29.3	33.5	28.2	23.7	27.1	26.3	29.6	39.1	34.9	330.5
1970	28.2	23.1	29.1	28.0	25.0	21.2	19.3	16.5	18.6	23.0	22.7	19.7	274.3
1971	20.3	20.5	25.9	25.4	26.3	23.5	24.4	28.1	36.3	13.0	23.7	45.3	312.6
1972	33.8	31.6	37.7	32.2	33.8	35.8	29.7	34.2	31.3	39.0	34.0	36.0	409.2
1973	32.3	30.2	38.3	38.0	38.8	37.9	35.4	33.9	42.5	43.8	44.8	43.3	459.4
1974	44.1	43.6	52.9	51.0	51.5	51.2	44.2	36.7	39.3	41.4	39.4	36.2	531.5
1975	36.9	36.0	43.8	43.8	37.5	37.5	34.3	38.1	41.0	49.8	41.6	39.9	488.3
1976	42.8	41.6	54.6	48.0	41.1	47.8	39.0	39.0	45.8	57.5	45.6	53.2	556.0
1977	42.8	51.6	47.1	47.2	36.9	36.5	29.4	31.0	40.2	24.8	26.3	46.3	460.1
1978[1]	32.4	35.4	37.9	35.3	34.7	33.1	31.8	35.9	37.9	44.8	50.1	50.4	457.9
1979[1]	45.6	45.4	56.7	44.1	50.5	57.0	46.2	47.1	55.8	59.0	62.3	58.1	627.8
1980[1]	50.6	54.2	52.1	45.2	42.4	47.2	34.6	44.3	48.0	42.0	38.4	40.9	540.2
1981[1]													

[1] Preliminary. *Source: Bureau of the Census*

Cottonseed and Cottonseed Products

U.S. cottonseed production for the 1980/81 season ending July 31, 1981 was about 25 percent smaller than production in the previous season. However, because beginning stocks were nearly double the year-earlier level, total supplies for the 1980/81 season were only about 16 percent smaller than for the 1979/80.

The 1980/81 cottonseed crush was estimated by the USDA at 4.25 million tons, slightly above the 1979/80 level. A crush of this size should produce close to 1.4 billion pounds of oil and 2 million tons of meal.

U.S. exports of cottonseed in the 1980/81 season were expected to increase sharply, to around 0.2 million tons—a level which would exceed the combined total of the previous 4 marketing years. The primary reason for the projected sharp increase in exports was the agreement signed December 3, 1980 between the U.S. and Mexico providing for Mexican purchases of 100 to 180 thousand tons of U.S. cottonseed in calendar 1981. Ending U.S. stocks of cottonseed on July 31, 1981 were projected at about 0.4 million tons, less than half the beginning level and the smallest in 4 years.

Cottonseed oil supplies for 1980/81 were expected to total nearly 1.5 billion pounds, slightly below the previous season's level. Estimated disappearance was expected to be split evenly between domestic use and exports, and at nearly 1.4 billion pounds, about unchanged from 1979/80.

Cottonseed meal supplies for 1980/81 were estimated by the USDA at 2 million tons, 4 percent below the previous season. Domestic use, reflecting fairly strong cattle feed demand was estimated at 1.8 million tons and exports at 150 thousand tons.

World Production of Cottonseed In Thousands of Metric Tons

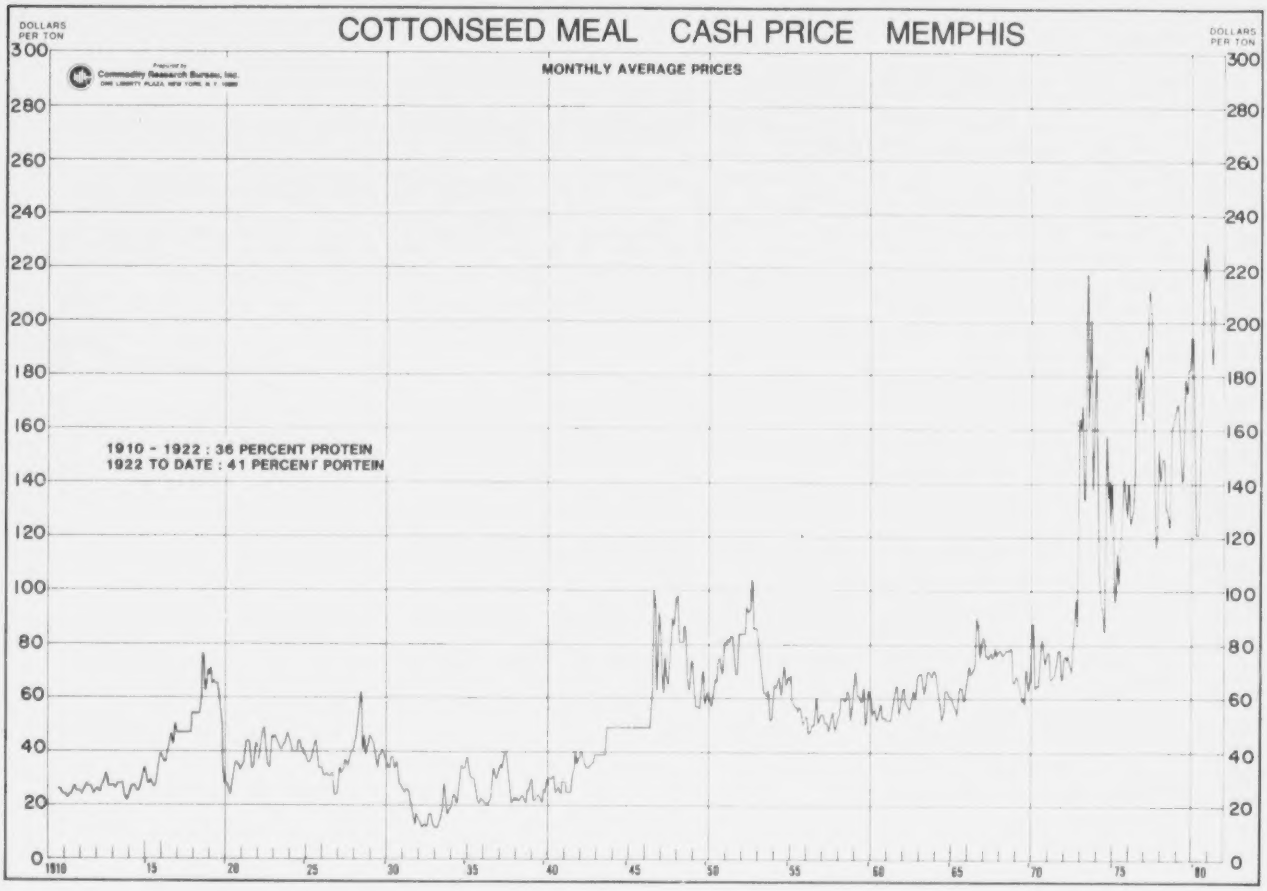
Crop Year	Sudan	Argentina	Brazil	China[2]	Egypt	India	Mexico	Pakistan	Peru	Turkey	Uganda	U.S.S.R.	United States	World Total
1968–9	426	228	1,458	3,255	758	2,138	1,067	1,073	180	700	154	3,755	4,209	22,376
1969–0	455	294	1,347	3,130	921	2,160	762	1,093	161	640	172	3,635	3,690	21,517
1970–1	472	170	994	3,300	884	1,920	631	1,105	165	640	152	4,365	3,690	21,324
1971–2	443	183	1,370	3,215	899	2,575	745	1,436	152	835	152	4,405	3,846	23,438
1972–3	351	254	1,304	2,750	895	2,247	779	1,425	135	870	154	4,525	4,892	23,998
1973–4	432	248	1,171	4,355	862	2,400	640	1,264	173	821	115	4,767	4,550	25,330
1974–5	395	349	1,034	4,185	760	2,618	989	1,285	150	956	75	5,212	4,091	25,745
1975–6[1]	200	270	802	4,185	800	2,444	453	1,259	131	736	75	4,686	2,749	23,738
1976–7[3]	300	364	984			2,138				768		4,888	3,764	
1977–8	357	414	844	4,100	690	2,500	590	1,151	138	920	20	4,693	5,009	24,915
1978–9	235	330	913	4,334	736	2,800	575	920	150	760	9	4,804	3,873	23,765
1979–0[1]	235	360	996	4,414	785	2,643	560	1,436	160	750	13	4,510	5,242	25,331
1980–1[3]				5,269		2,700		1,422				5,500	3,955	26,219
1981–2														

[1] Preliminary. [2] Including Manchuria. [3] Estimated. *Source: Foreign Agricultural Service, U.S.D.A.*

Salient Statistics of Cottonseed in the United States

Year Begin. Aug.	Farm Value of Production Mil. $	Exports	Seed for Planting	Residual[2]	Crushings	Products Produced					Yield Per Ton Crushed				Total Value of Pdt's. $ Per Ton
		In Thousands of Short Tons				Oil	Meal	Linters[5]	Hulls	Other[3]	Oil	Meal	Linters	Hulls	
						In Million Pounds					In Pounds				
1968–9	234.5	3	156	19	4,363	1,424	3,970	1,306	2,050	458	326	910	189	470	82.13
1969–0	167.3	23	158	41	3,925	1,282	3,670	1,234	1,810	344	327	935	189	461	86.34
1970–1	229.6	39	163	—	3,728	1,211	3,458	1,147	1,744	320	325	927	194	468	94.68
1971–2	240.9	3	189	70	3,960	1,275	3,588	1,145	1,956	379	322	906	182	494	89.79
1972–3	267.1	10	173	57	4,880	1,535	4,448	1,341	2,430	502	314	911	173	498	121.14
1973–4	501.2	49	198	6	4,792	1.551	4,354	1,341	2,346		324	908	175	489	186.76
1974–5	611.2	6	128	74	4,226	1.347	3,770	1,269	2,144		319	892	190	507	189.19
1975–6	312.3	61	190	367	2,952	918	2,476	847	1,546		334	891	181	523	171.66
1976–7	425.4	26	181	333	3,499	1,198	3,286	983	1,832		326	898	177	524	189.04
1977–8	388.0	41	175	454	4,313	1,453	4,166	1,174	2,152		322	918	172	500	160.89
1978–9[1]	485.6	16	175	247	4,127	1,282	3,770	1,077	2,068						221.00
1979–0[1]	697.6	94	191	725	4,233	1,423	4,098								194.65
1980–1[4]	567.0	200	—700—		4,250	1,363	3,910								
1981–2															

[1] Preliminary. [2] Mainly used on farms for feed & fertilizer. [3] Including loss; and also motes, grabbots & hullfibers. [4] Forecast. [5] In THOUSANDS OF RUNNING BALES. *Source: Economic Research Service, U.S.D.A.*



Average Wholesale Price of Cottonseed Meal (41% Protein-Expeller) at Memphis In Dollars Per Ton

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1968	77.90	77.60	76.20	77.00	77.60	78.20	78.20	78.00	79.10	66.20	65.60	67.80	74.95
1969	68.40	64.60	62.50	61.70	59.10	59.60	58.00	71.00	67.80	63.40	67.75	78.50	66.00
1970	88.10	74.50	64.40	64.90	65.20	70.20	78.30	82.00	74.50	72.60	75.90	76.70	73.80
1971	77.40	73.60	66.80	68.20	68.80	71.30	74.60	78.00	76.50	66.80	67.80	74.80	72.05
1972	75.70	74.40	75.60	73.60	72.25	70.30	81.40	86.60	96.50	86.60	118.90	164.40	89.69
1973	160.30	168.75	134.75	134.20	207.80	217.50	161.20	201.25	178.75	138.00	160.60	182.50	170.47
1974	159.50	119.40	109.30	93.60	94.25	85.00	133.50	157.50	135.00	141.25	125.00	140.00	124.44
1975	121.60	100.50	95.90	114.00	105.60	116.40	123.25	131.70	141.50	131.60	127.50	139.50	119.93
1976	136.25	125.00	127.50	130.00	143.75	182.30	184.75	170.70	184.40	163.50	171.00	185.60	158.73
1977	190.00	190.60	184.50	204.40	211.90	200.00	163.10	129.00	116.25	121.25	152.60	141.25	167.07
1978	148.00	148.60	149.40	131.25	130.00	127.50	124.40	149.00	162.00	164.00	166.25	167.50	147.33
1979	169.50	161.90	156.90	141.25	143.00	171.00	178.50	173.75	183.10	183.00	183.75	195.00	170.06
1980	167.00	156.25	136.25	120.50	121.00	129.40	157.00	198.40	224.50	215.60	230.00	224.00	173.33
1981	205.60	178.75	185.00	205.00									

Source: Economic Research Service, U.S.D.A.

Cottonseed Crushed (Consumption) in the United States In Thousands of Short Tons

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Total
1968–9	73	125	504	523	537	570	447	443	385	336	238	153	4,363
1969–0	119	161	479	501	506	497	453	422	308	220	160	100	3,925
1970–1	84	98	417	477	471	463	439	410	311	238	186	134	3,728
1971–2	139	109	349	458	484	474	425	481	344	298	228	169	3,960
1972–3	196	175	444	529	499	528	480	522	450	426	342	290	4,880
1973–4	275	185	370	532	465	549	463	499	443	424	320	268	4,792
1974–5	235	202	385	431	441	471	434	453	356	331	261	225	4,226
1975–6	225	158	219	291	324	366	336	295	241	203	169	125	2,952
1976–7	115	91	262	403	416	422	414	407	278	266	230	194	3,499
1977–8	187	186	370	459	431	443	403	449	378	341	346	321	4,313
1978–9	312	254	348	423	392	418	404	426	355	325	255	217	4,129
1979–0[1]	258	175	304	394	379	442	388	454	374	388	359	315	4,230
1980–1[1]	330	306	365	426	400	440	378	695					
1981–2													

[1] Preliminary. *Source: Bureau of Census*

Production of Cottonseed Cake and Meal in the United States In Thousands of Short Tons

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Total
1968–9	33.5	54.5	231.5	240.3	246.7	255.3	215.9	200.9	174.9	154.9	106.8	69.6	1,985
1969–0	56.9	74.8	221.5	229.9	240.0	232.5	213.4	197.7	144.2	103.1	74.1	46.6	1,835
1970–1	38.0	45.2	194.1	219.2	218.2	215.8	202.4	192.2	145.3	111.1	86.1	61.1	1,729
1971–2	66.4	50.3	161.2	208.9	219.8	212.7	191.1	216.5	155.9	132.4	101.8	76.6	1,794
1972–3	87.2	78.4	200.4	242.4	228.4	238.7	218.0	236.8	208.0	195.7	158.8	131.0	2,224
1973–4	125.6	83.1	168.6	242.4	211.4	246.7	209.0	224.1	200.3	194.0	146.7	124.6	2,177
1974–5	109.3	95.3	171.9	186.9	194.1	207.3	192.2	203.4	159.0	150.7	117.0	97.6	1,888
1975–6	100.2	70.9	100.2	127.7	141.6	158.2	150.8	133.9	107.6	91.2	76.1	56.2	1,315
1976–7	53.0	41.5	116.6	181.0	187.8	189.2	185.6	183.9	125.0	120.1	100.1	86.6	1,571
1977–8	83.2	84.0	167.9	210.2	199.4	203.2	187.9	206.6	172.5	156.6	158.7	150.1	1,980
1978–9	148.0	121.4	162.4	197.1	184.3	197.5	193.1	201.2	166.5	155.7	122.2	105.8	1,955
1979–0[1]	119.7	79.3	145.9	183.4	173.0	201.0	178.0	204.0	168.9	181.6	167.8	148.5	1,951
1980–1[1]	152.3	144.0	170.3	202.1	191.1	204.9	176.3	173.7					
1981–2													

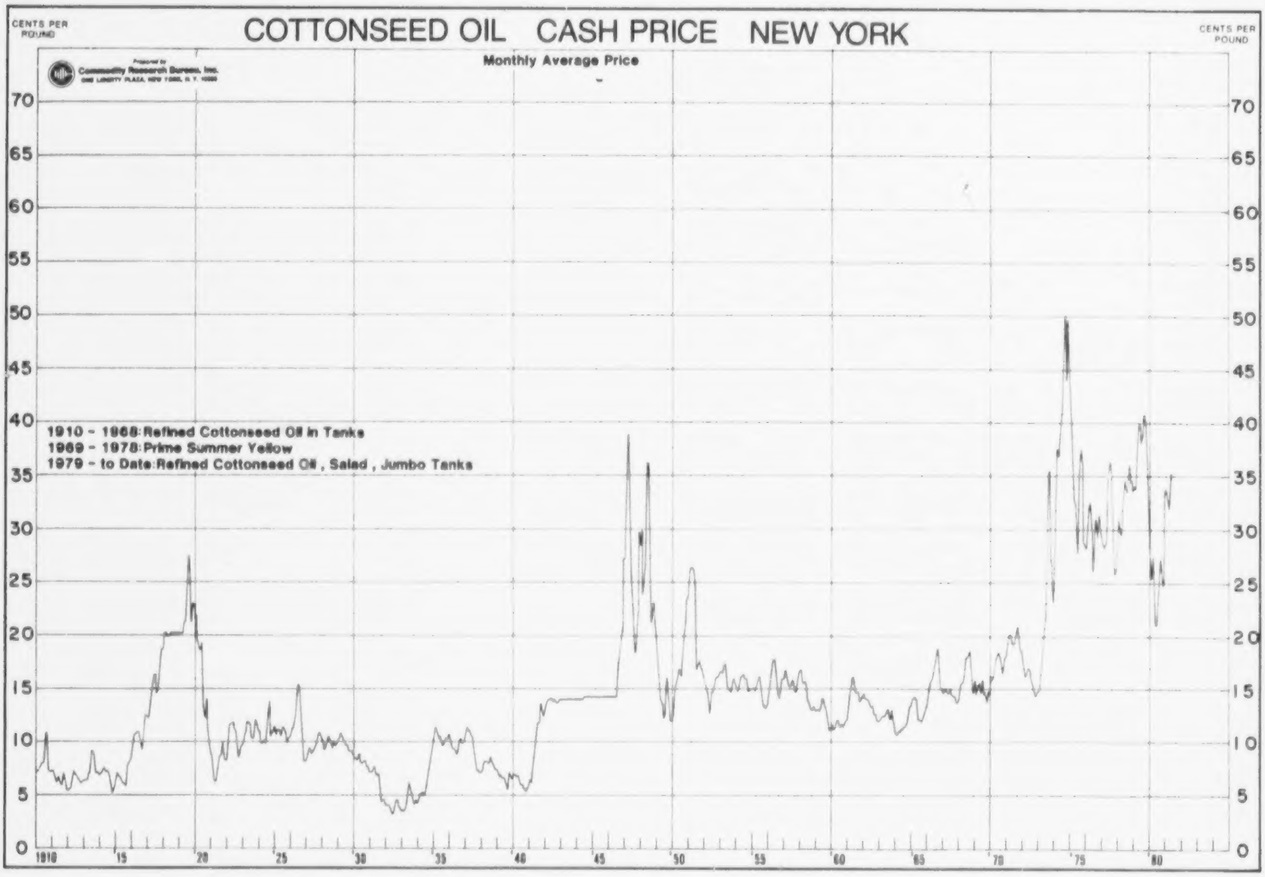
[1] Preliminary. *Source: Bureau of Census*

U.S. Production of Crude Cottonseed Oil In Millions of Pounds

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Total
1968–9	22.9	39.6	162.6	167.7	173.7	186.2	155.8	145.6	127.3	112.4	80.4	50.3	1,425
1969–0	37.2	51.0	156.3	161.4	161.9	160.3	151.3	140.2	102.8	73.2	53.1	33.1	1,282
1970–1	26.6	30.5	134.3	153.4	152.7	151.5	141.2	134.0	103.3	78.8	61.0	43.5	1,211
1971–2	47.0	34.3	111.8	149.0	154.0	151.1	134.9	154.4	110.2	97.7	75.8	54.4	1,275
1972–3	61.2	53.4	139.3	165.5	157.3	163.3	152.0	163.4	141.8	136.3	108.4	92.9	1,304
1973–4	87.8	56.2	120.6	169.8	149.0	176.9	150.2	160.4	144.2	140.0	105.9	90.1	1,551
1974–5	78.0	66.9	122.8	138.2	139.1	147.6	137.5	143.4	111.6	105.8	84.1	72.3	1,347
1975–6	76.1	56.1	76.3	101.0	103.2	118.1	111.2	100.2	80.0	67.3	56.1	40.3	986
1976–7	38.0	28.2	80.1	129.2	135.6	135.0	134.3	134.4	91.1	89.3	78.5	67.3	1,141
1977–8[1]	63.0	60.1	115.1	146.3	140.2	141.6	129.5	141.8	122.1	109.2	113.9	107.8	1,391
1978–9[1]	103.5	82.0	108.8	134.0	123.5	134.4	128.0	135.3	115.0	103.7	86.3	73.8	1,328
1979–0[1]	85.5	53.5	98.6	126.5	119.9	142.8	125.7	145.1	119.8	125.5	116.8	104.2	1,363
1980–1[1]	104.9	93.1	116.4	130.6	122.3	131.7	118.9	115.5					
1981–2													

[1] Preliminary. *Source: Bureau of Census*

COTTONSEED AND COTTONSEED PRODUCTS



Cottonseed Oil Wholesale Prices, Refined, Tanks at N.Y. In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1968	15.3	15.5	15.6	16.0	17.5	18.0	18.0	18.6	16.2	15.5	14.6	15.9	16.4
1969	14.5	15.4	15.2	15.6	14.6	15.9	14.5	14.8	13.8	14.8	14.5	15.8	15.0
1970	16.2	16.0	17.0	17.9	18.3	18.5	18.2	17.6	16.5	17.6	18.0	18.2	17.5
1971	19.4	20.2	20.1	19.4	19.1	19.3	20.3	20.9	20.0	18.7	18.5	17.8	19.5
1972	17.1	16.5	16.3	17.0	16.7	16.3	15.8	15.4	15.0	14.4	14.8	14.8	15.8
1973	15.2	17.6	18.6	20.0	21.5	23.2	24.0	35.5	27.1	26.7	23.3	28.8	23.5
1974	31.9	37.6	36.9	39.0	40.1	40.9	43.5	50.0	44.1	49.7	46.1	43.2	41.9
1975	38.7	33.8	32.9	32.1	27.8	28.6	35.0	37.6	35.9	32.4	28.9	28.2	32.7
1976	30.0	32.1	32.5	30.0	26.1	26.9	31.0	29.3	31.5	N.A.	29.8	28.7	29.7
1977	28.4	28.9	32.0	35.3	36.4	35.5	30.1	28.0	25.8	26.3	28.3	31.0	30.5
1978	29.9	29.5	32.0	33.1	34.6	33.6	34.4	36.1	34.5	34.6	33.7	34.1	33.3
1979[1]	33.5	38.0	38.5	39.5	38.0	38.0	40.5	38.8	39.0	36.5	34.0	28.5	36.9
1980	25.5	27.5	24.3	21.5	21.0	22.3	26.3	27.3	26.3	24.8	33.0	33.8	26.1
1981	33.4	32.0											

[1] Beginning 1979, prices are for cottonseed oil, salad, jumbo tanks, F.O.B. N.Y., Tuesday. *Source: Bureau of Labor Statistics*

Supply & Distribution of Cottonseed Oil in the United States In Millions of Pounds

									Utilization							
									Food Uses					Nonfood Uses		
Crop Year Beginning August	Production from Dom. Materials	Imports for Consumption	Stocks Aug. 1	Total Supply	Exports	Shipments to U.S. Terr.	Domestic Disappearance	Per Capita Consumption Lbs.	Shortening	Margarine	Salad & Cooking Oils	Other	Total	Foots & Loss	Other	Total
1968	1,425	7.4	158	1,590	131.8	1.8	1,017	5.03	222	69	497	161	948	63	6	69
1969	1,282	.1	440	1,722	437.6	1.3	1,069	5.23	296	72	532	91	991	69	8	78
1970	1,211	—	214	1,425	357.5	1.4	899	4.35	203	65	485	64	818	70	11	81
1971	1,275	—	167	1,442	421.4	1.2	815	3.91	166	64	409	80	718	79	18	91
1972	1,535	.2	204	1,739	585.9	1.9	961	4.58	192	64	567	19	841	104	16	120
1973	1,551	—	190	1,741	569.2	2.5	1,034	4.89	219	64	586	55	924	101	9	110
1974	1,347	—	135	1,482	673.2	1.1	662	3.11	164	48	349	—	560	94	7	102
1975	986	—	146	1,132	534.6	.7	439	2.04	130	49	189	—	367	65	7	72
1976	1,141	—	157	1,298	610.0	.9	535	2.47	149	47	280	—	474	51	9	60
1977	1,386	—	153	1,539	744.1	.2	693	3.17	174	44	378	—	595	90	8	97
1978[1]	1,328	—	107	1,435	661		650		188	42	447					
1979[1]	1,423	—	117	1,540	727				168	25	403					
1980[2]	1,363	—	145	1,508	710											
1981																

[1] Preliminary. [2] Estimate. *Source: Economic Research Service, U.S.D.A.*

United States Production of Refined Cottonseed Oil In Millions of Pounds

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Total
1968–9	29.4	30.0	99.3	124.8	125.4	144.3	130.4	119.8	119.9	109.4	94.0	72.2	1,199
1969–0	54.9	61.0	106.2	110.9	129.0	120.9	125.1	129.9	96.6	77.7	67.6	42.5	1,122
1970–1	27.1	27.6	71.6	116.0	116.6	108.5	108.6	119.8	77.2	80.4	73.2	44.9	972
1971–2	51.2	44.8	60.9	102.9	113.3	104.0	90.8	118.3	98.3	98.2	88.8	61.3	1,033
1972–3	74.6	41.8	95.4	121.9	140.1	124.9	135.0	140.7	128.9	126.0	99.1	76.8	1,305
1973–4	102.7	66.6	89.0	117.2	123.3	134.9	118.2	125.5	129.3	117.4	90.2	83.2	1,298
1974–5	88.5	63.5	81.8	113.0	117.2	124.4	125.5	117.0	109.0	102.5	93.0	74.0	1,209
1975–6	68.0	73.1	53.6	75.5	97.1	99.6	89.6	91.6	76.2	70.9	60.4	52.7	908
1976–7[1]	48.5	33.4	37.7	73.0	86.2	95.4	98.0	103.5	79.2	82.0	73.3	55.8	866
1977–8[1]	57.8	48.7	77.8	111.4	112.8	111.1	198.2	114.7	102.7	91.3	95.2	91.8	1,214
1978–9[1]	117.5	84.7	83.7	116.0	100.4	118.8	113.1	126.4	108.2	97.9	78.7	78.7	1,224
1979–0[1]	92.7	56.7	69.6	97.0	103.0	119.1	102.7	118.7	107.5	112.8	203.4	103.5	1,186
1980–1[1]	96.2	94.8	94.1	119.8	125.1	131.3	99.6						
1981–2													

[1] Preliminary. *Source: Bureau of Census*

U.S. Stocks of Cottonseed Oil (Crude & Refined) at End of Month In Millions of Pounds

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1968–9	118.7	98.7	153.2	213.5	272.7	342.4	370.0	430.0	460.8	466.2	467.6	439.7
1969–0	418.0	376.8	372.8	383.9	398.6	371.7	394.0	351.3	325.1	297.7	252.2	213.9
1970–1	158.1	121.5	140.1	163.5	184.3	202.3	224.6	246.9	265.7	279.7	224.6	167.3
1971–2	142.9	93.8	130.0	159.5	188.3	239.4	277.3	295.0	294.8	266.0	239.7	203.9
1972–3	137.9	114.2	142.5	161.5	187.4	215.3	239.0	212.7	220.6	232.5	215.8	189.9
1973–4	181.5	114.3	124.5	161.6	157.9	202.4	180.9	198.8	198.9	190.4	175.5	135.3
1974–5	121.4	109.8	123.2	166.9	177.4	197.6	210.2	188.1	208.0	173.1	164.0	146.2
1975–6	126.4	136.1	125.6	153.1	160.3	179.6	192.1	217.1	198.0	204.0	153.6	157.5
1976–7[1]	135.9	104.9	115.5	167.2	191.6	207.7	233.0	237.5	226.9	214.0	182.5	153.0
1977–8[1]	122.2	79.4	91.5	112.4	132.7	151.4	156.4	176.4	180.4	154.6	130.7	106.7
1978–9[1]	102.3	84.8	101.4	123.0	127.1	152.2	152.9	141.0	143.1	141.0	139.5	116.9
1979–0[1]	117.2	86.4	93.1	129.0	144.3	173.2	198.9	212.8	188.7	165.8	167.1	144.6
1980–1[1]	138.6	121.9	122.6	152.9	170.1	18.36	193.9					
1981–2												

[1] Preliminary. *Source: Bureau of Census*

COTTONSEED AND COTTONSEED PRODUCTS

Average Price of Crude Cottonseed Oil, F.O.B. Southeastern Mills (Tank Cars) In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1968	12.1	12.9	12.9	13.0	14.7	15.3	15.4	16.0	12.7	10.5	10.7	10.7	13.1
1969	10.6	11.0	11.2	11.3	11.5	11.8	11.4	11.0	10.1	10.2	10.9	10.4	11.0
1970	10.9	12.1	13.2	14.0	14.3	14.4	14.3	14.1	12.9	13.4	14.1	14.1	13.5
1971	14.5	16.1	16.1	15.6	15.3	15.3	15.4	16.5	16.1	14.4	13.9	13.9	15.3
1972	13.4	13.5	12.6	12.4	12.1	12.4	11.9	11.4	10.1	10.1	10.4	10.6	11.8
1973	10.6	12.9	14.6	14.6	14.6	14.6	14.6	14.6	22.5	22.0	19.0	27.0	19.8
1974	29.0	33.5	31.5	35.0	37.0	36.5	39.0	47.0	39.5	45.0	46.0	37.0	38.0
1975	36.5	32.0	28.0	27.0	23.0	23.0	29.0	32.0	28.5	26.5	23.5	22.0	27.6
1976	24.0	26.0	26.5	24.0	20.5	21.5	26.5	23.0	26.0	22.5	24.0	22.5	23.9
1977	22.0	23.0	27.0	30.0	31.0	31.0	23.0	22.0	19.0	20.0	20.5	23.5	24.3
1978	23.0	22.3	25.0	25.0	27.0	26.5	27.5	29.0	34.0	28.5	27.3	27.5	26.9
1979	27.3	32.0	32.5	32.0	32.0	32.0	32.0	32.0	32.9	29.7	27.6	26.2	30.7
1980	24.3	23.8	22.4	20.4	20.9	22.3	27.8	29.0	27.5	27.2	27.8	27.0	25.0
1981													

Source: Economic Research Service, U.S.D.A.

U.S. Exports of Cottonseed Oil (Crude & Refined) In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1968	4.5	2.0	3.6	8.4	.8	5.4	7.4	.8	3.3	3.9	12.0	9.5	61.7
1969	6.9	20.7	9.5	14.9	12.8	4.9	23.2	6.9	4.7	43.4	56.1	42.6	246.5
1970	53.0	52.2	56.2	24.0	61.0	12.2	17.5	8.8	17.8	12.0	18.6	36.7	369.8
1971	43.5	39.2	40.3	18.2	21.4	31.7	69.8	14.3	26.2	3.1	36.3	58.5	400.7
1972	23.1	47.4	50.4	47.8	30.6	49.7	33.5	58.3	13.0	18.9	70.6	32.2	475.4
1973	57.9	56.6	78.7	40.9	63.7	55.3	39.0	23.8	43.2	22.6	24.9	38.2	545.0
1974	28.8	79.0	52.3	56.3	94.2	52.2	49.5	36.7	24.2	24.1	33.8	75.1	606.1
1975	78.4	67.3	96.6	56.8	92.6	17.8	69.7	43.7	28.9	21.3	46.7	36.7	656.5
1976	76.2	49.3	51.8	42.8	65.6	47.9	23.7	24.4	13.4	33.6	15.7	76.6	520.9
1977[1]	50.4	80.5	104.2	72.4	23.0	58.3	57.4	52.5	65.5	35.4	64.2	67.7	731.2
1978[1]	50.6	68.2	84.9	61.6	59.8	63.5	70.2	50.0	82.3	25.9	29.2	82.5	728.8
1979[1]	56.7	71.2	89.9	51.3	52.5	63.1	63.8	18.1	56.6	34.0	48.9	27.0	633.0
1980[1]	34.8	28.1	110.5	71.0	105.0	31.4	70.3	77.6	89.3	53.7	66.6	47.1	785.4
1981[1]	77.0												

[1] Preliminary. *Source: Dept. of Commerce*

U.S. Consumption of Cottonseed Oil in End Products[1] In Millions of Pounds

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Total
1968–9	63.0	59.2	77.3	68.9	70.3	70.3	66.1	66.0	74.7	69.7	88.6	62.4	836.5
1969–0	64.9	64.9	82.9	83.5	95.7	81.4	84.5	90.9	90.8	78.2	80.6	63.0	961.3
1970–1	63.0	65.8	77.3	79.6	76.9	67.8	73.6	69.4	56.1	61.2	70.9	50.1	811.7
1971–2	57.8	50.8	52.9	57.4	60.5	56.1	52.3	70.0	51.6	66.5	66.1	58.0	700.0
1972–3	74.9	55.0	70.1	73.1	66.8	63.7	58.4	91.8	76.7	92.2	84.1	72.3	879.1
1973–4	69.4	57.2	73.6	78.5	88.5	87.2	77.8	83.0	78.7	77.8	61.8	74.5	908.0
1974–5	57.2	52.5	58.3	62.1	61.5	60.5	57.9	58.1	56.0	66.7	53.8	56.8	698.4
1975–6	49.6	46.7	51.0	50.0	53.6	45.0	48.3	52.1	48.3	43.3	58.0	39.3	585.2
1976–7	51.2	45.0	43.7	56.6	48.0	47.9	47.8	55.7	56.7	56.1	56.2	45.9	610.8
1977–8	51.8	48.6	47.5	52.6	58.5	50.0	52.3	55.6	55.7	63.4	65.9	62.3	664.2
1978–9	60.0	57.3	55.6	64.6	54.6	55.9	57.0	60.9	48.9	64.8	45.9	41.0	666.5
1979–0[2]	53.9	43.1	44.9	50.8	51.1	55.6	56.4	56.6	58.6	68.2	65.1	57.9	662.2
1980–1[2]	65.5	55.6	57.5	51.8	49.5	37.5	44.0						

[1] Includes small amount exported but does not include imported oil. [2] Preliminary. *Source: Bureau of the Census*

Currencies *(see feature study on page 20)*

Early in 1980, foreign currencies trading in U.S. markets was dominated by the rapid climb in U.S. gold prices and the related decline in the exchange value of the U.S. dollar. Then, in late winter, the U.S. dollar strengthened against most currencies for a relatively brief period, after U.S. interest rates increased and the bull market in gold collapsed. By April/May, however, U.S. interest rates had begun to decline, and the value of the U.S. dollar followed them downward. The U.S. dollar continued relatively weak with the renewal of the Federal Reserve Board's anti-inflationary tight money policy in late summer. The consequent renewed increases in U.S. interest rates began to revive foreign investment in the U.S. dollar—until, by January 1981, all the major currencies had begun downtrends vs. the U.S. dollar.

Reports in December 1980 that the U.S. had reduced its rate of consumption (and thus its imports) of petroleum also helped the U.S. dollar.

Other factors that affected the currency markets in 1980 included: (1) the Iran-Iraq war, which threatened to raise international petroleum costs to many nations, and thus weighed on currency values; (2) the situation of the U.S. hostages held in Iran, which potentially affected higher oil prices, and which related to the large amount of Iranian funds "frozen" in dollar form in U.S. banks.

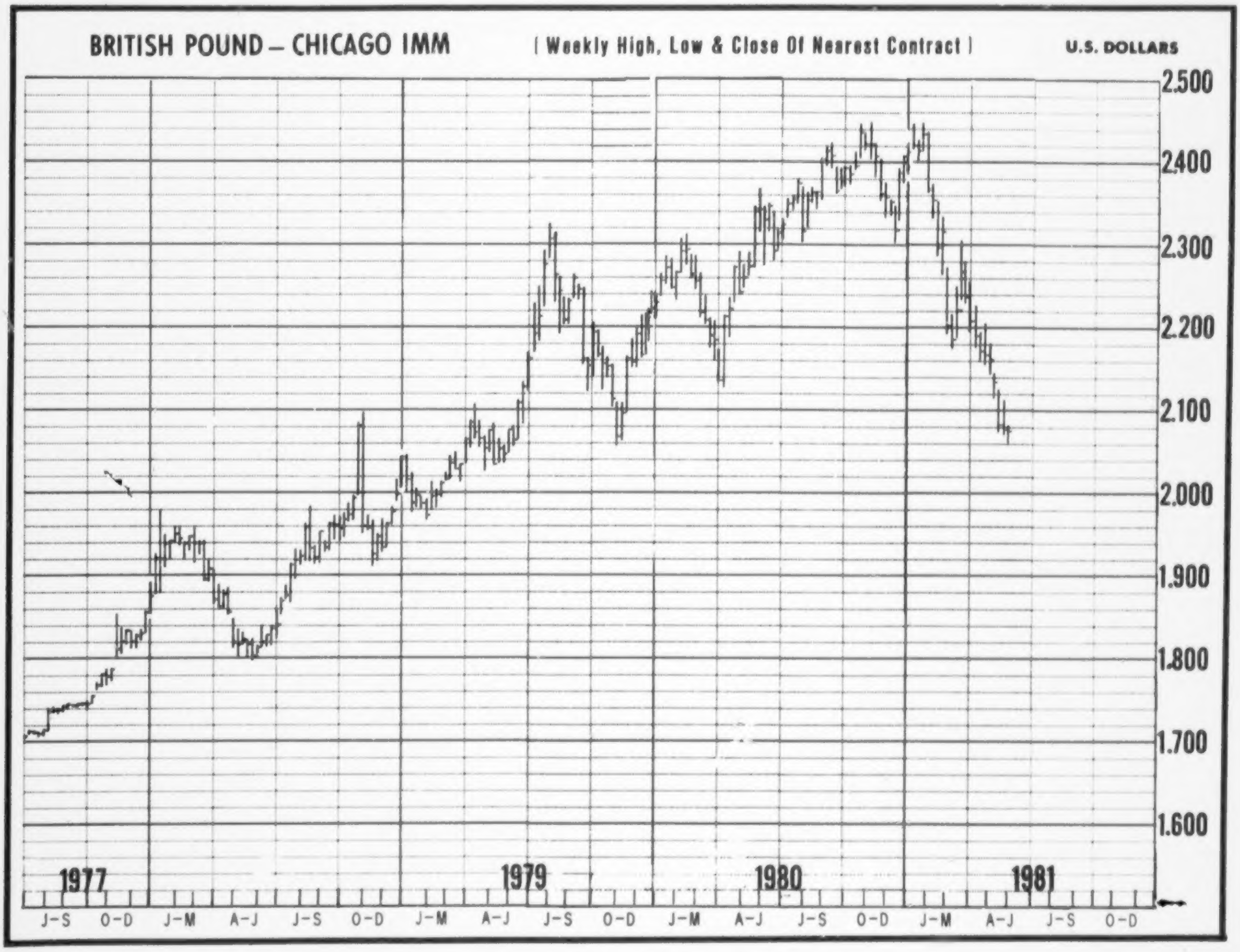
The various currency markets also were influenced by events in their issuing nation. Japan attempted to dampen buying enthusiasm for the yen because a higher-value yen could have negatively affected Japan's booming exports. But, Japan's strong economy and balance of payments attracted investors, especially from the Middle East, and the yen gained against most currencies until late 1980.

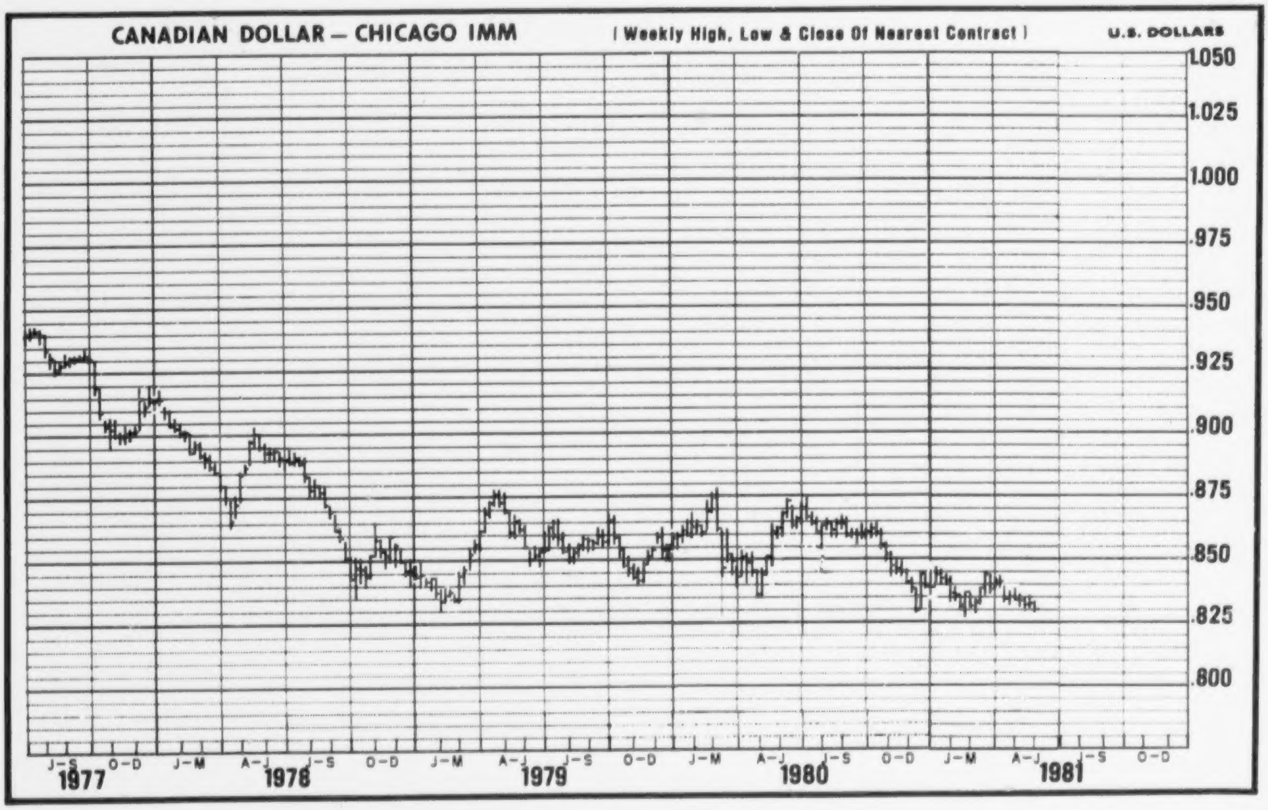
The British pound began 1980 with a major steel strike and rampant inflation. It then gained on reports of oil finds in the North Sea, but slipped again late in the year as the British economy weakened, inflation continued, and interest rates dropped.

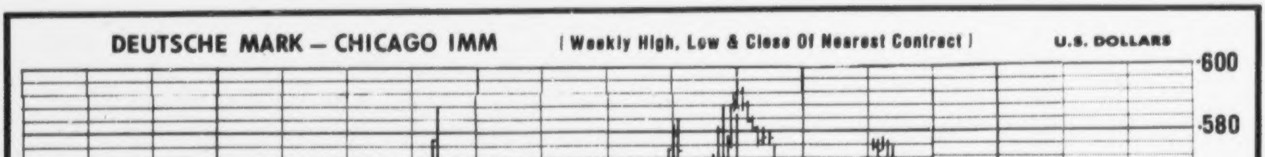
The Deutsche mark weakened in mid-1980, influenced by a weaker economy. In September, West Germany reported its first deficit in trade balance in 15 years. The mark's downtrend continued into 1981 when the threat of a Soviet invasion of Poland caused selling in the mark.

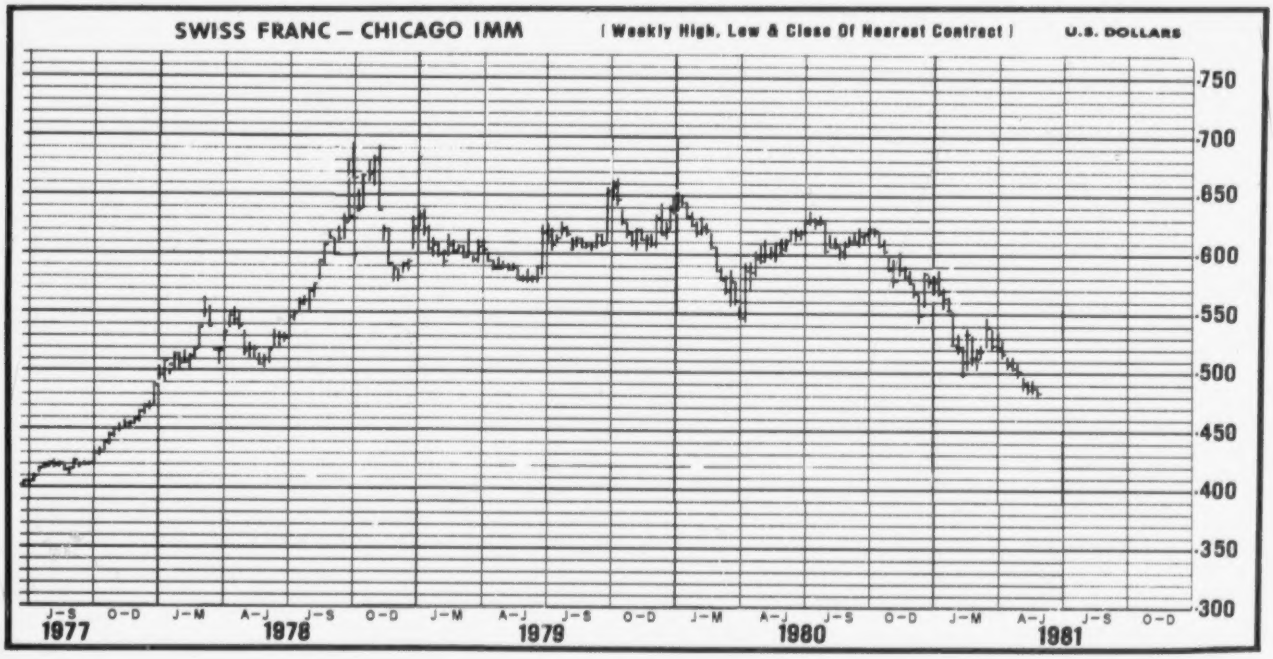
Futures Markets

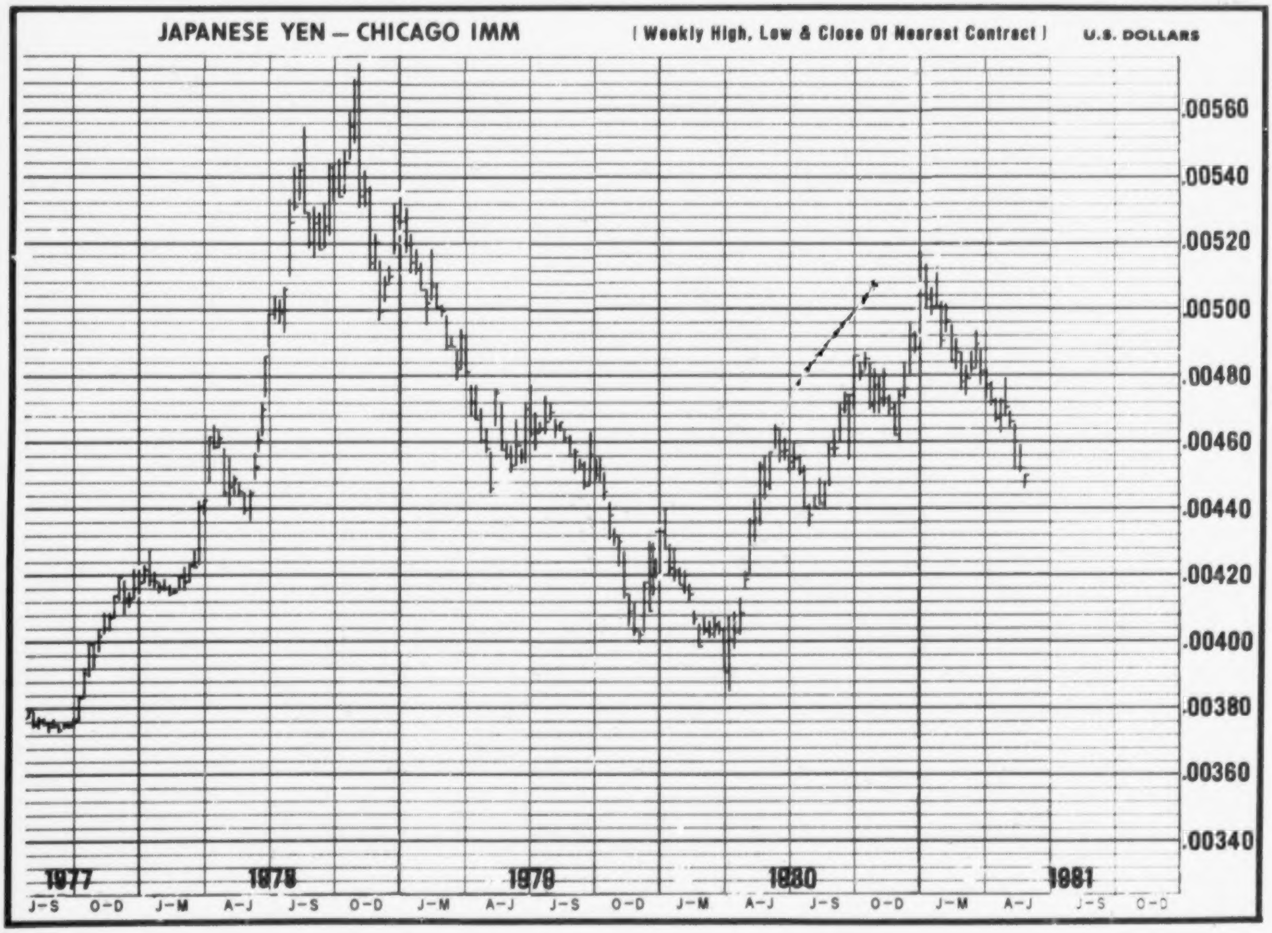
The International Monetary Market of the Chicago Mercantile Exchange lists futures contracts in the British pound, Canadian dollar, Deutsche mark, Dutch guilder, French franc, Japanese yen, Swiss franc, and Mexican peso.




CANADIAN DOLLAR – CHICAGO IMM
(Weekly High, Low & Close Of Nearest Contract)
U.S. DOLLARS
1.050
1.025
1.000
.975
.950
.925
.900
.875
.850
.825
.800
J–S
O–D
J–M
A–J
J–S
O–D
J–M
A–J
J–S
O–D
J–M
A–J
J–S
O–D
J–M
A–J
J–S
O–D
1977
1978
1979
1980
1981


DEUTSCHE MARK – CHICAGO IMM
(Weekly High, Low & Close Of Nearest Contract)
U.S. DOLLARS
.600
.580
.560
.540
.520
.500
.480
.460
.440
.420
.400
A–J
J–S
O–D
J–M
A–J
J–S
O–D
J–M
A–J
J–S
O–D
J–M
A–J
J–S
O–D
J–M
A–J
J–S
1977
1978
1979
1980
1981


SWISS FRANC – CHICAGO IMM
(Weekly High, Low & Close Of Nearest Contract)
U.S. DOLLARS
.750
.700
.650
.600
.550
.500
.450
.400
.350
.300
J–S
O–D
J–M
A–J
J–S
O–D
J–M
A–J
J–S
O–D
J–M
A–J
J–S
O–D
J–M
A–J
J–S
O–D
1977
1978
1979
1980
1981


JAPANESE YEN – CHICAGO IMM
(Weekly High, Low & Close Of Nearest Contract)
U.S. DOLLARS
.00560
.00540
.00520
.00500
.00480
.00460
.00440
.00420
.00400
.00380
.00360
.00340
1977
1978
1979
1980
1981
J–S
O–D
J–M
A–J
J–S
O–D
J–M
A–J
J–S
O–D
J–M
A–J
J–S
O–D
J–M
A–J
J–S
O–D

Distilled Spirits

Salient Statistics of Distilled Spirits in the United States In Thousands of Gallons[1]

Fiscal Year[4] Ending Sept. 30	Whiskey					All Distilled Spirits				
	Production	Tax-Paid Withdrawals	Imports For Consumption[2]	Stocks End of Period	Bottled For Consumption	Production	Tax-Paid Withdrawals	Imports For Consumption[2]	Stocks End of Period	Bottled For Consumption
1968	163,878	96,863	66,500	888,106	182,130	905,459	227,703	75,452	1,149,948	284,543
1969	179,943	100,321	74,290	933,746	188,961	985,641	240,343	87,080	1,166,100	300,537
1970	160,039	111,796	75,590	959,727	192,331	917,457	256,342	90,890	1,197,001	312,074
1971	127,220	111,972	89,290	960,509	186,050	759,251	256,999	102,140	1,162,398	310,056
1972	126,274	120,794	87,690	958,386	195,819	764,351	281,584	100,160	1,107,557	335,482
1973	111,974	135,937	92,300	926,112	188,245	859,152	282,840	107,280	1,060,634	336,813
1974	92,599	138,105	93,920	875,742	184,296	821,602	292,428	110,980	1,006,206	348,776
1975	49,958	136,950	94,980	779,762	181,683	717,550	295,445	113,460	950,044	356,916
1976	79,178	134,773	92,070	722,884	178,701	667,682	304,491	112,710	873,632	369,346
1977[4]	81,828	125,878	91,150	678,682	165,751	656,128	295,845	112,990	810,948	360,697
1978	71,382	125,977	101,890	624,886	175,970	676,723	321,294	128,600	759,592	396,479
1979[3]	101,270[2]	127,050[2]	95,400	608,060			233,300[2]	123,650	670,360	410,000[2]
1980[3]			86,000	565,610				113,980	625,830	
1981										

[1] Production, withdrawals, and stocks are tax gallons; imports are proof gallons; consumption are wine gallons. [2] Data are for CALENDAR YEARS. [3] Preliminary. [4] Fiscal year ending JUNE 30 PRIOR TO 1977.
Sources: Internal Revenue Service; Department of Commerce

Distilled Spirits Bottled for Consumption in the U.S. In Millions of Wine Gallons

Fis. Yr. End. Sept. 30[1]	Whiskey	Brandy	Rum	Gin	Cordials & Liqueurs	Vodka	Alcohol & Spirits	Other Spirits	Total
1968	182.130	10.317	2.090	32.479	17.196	39.543	.139	.651	284.543
1969	188.960	11.071	2.337	33.857	20.031	43.211	.131	.938	300.537
1970	192.331	11.735	2.533	35.780	20.699	47.843	.123	1.030	312.074
1971	186.050	11.913	2.864	35.042	20.555	52.407	.148	1.078	310.056
1972	195.819	13.053	3.378	38.009	23.311	60.116	.146	1.649	335.482
1973	188.245	13.908	4.693	35.890	25.095	66.494	.144	2.344	336.813
1974	184.296	13.855	5.495	37.319	28.391	75.285	.155	3.979	348.776
1975	181.683	13.483	6.791	37.169	30.416	82.159	.180	5.035	356.916
1976	178.701	14.150	8.789	39.242	34.189	88.459	.296	5.519	369.346
1977[1]	165.751	14.660	11.147	37.055	35.822	89.833	.256	6.173	360.697
1978	175.970	14.451	13.952	39.938	44.357	94.152	.214	13.445	396.479
1979									

A "wine gallon" is a U.S. gallon of liquid measure equivalent to the volume of 231 cubic inches. [1] Fiscal year ending JUNE 30 PRIOR TO 1977. *Source: Internal Revenue Service*

Grains Used in Production of Alcohol, Dist. Spirits, & Ferm. Malt Liquors in U.S. In Thousands of Bushels

Year Begin. July 1	Corn and Products			Barley and Malt			Wheat				
	Alcohol & Distilled Spirits	Fermented Malt Liquors[3]	Total	Alcohol & Distilled Spirits	Fermented Malt Liquors	Total	Alcohol & Distilled Spirits	Fermented Malt Liquors	Total	Rye[2]	Sorghum Grains
1964–5	27,704	39,467	67,171	6,181	88,692	94,873	68	9	77	3,801	3,493
1965–6	29,830	40,688	70,518	7,064	90,340	97,404	66	8	74	4,393	3,062
1966–7	32,627	40,658	73,285	6,812	96,204	103,016			75	4,663	2,786
1967–8	33,980	40,247	74,227	7,101	97,350	104,451				4,744	2,809
1968–9	33,024	41,537	74,561	6,968	100,956	107,924				4,681	3,372
1969–0	31,202	43,121	74,333	6,669	109,512	116,181				4,279	2,963
1970–1	24,030	45,251	69,281	4,338	108,201	113,039				3,435	3,716
1971–2	24,848	45,441	70,289	4,496	113,209	117,705				3,066	4,750
1972–3	29,498	45,257	74,755	4,193	114,608	118,801					2,025
1973–4[1]	33,095	46,978	80,073	3,659	121,892	125,551					2,515
1974–5											

[1] Preliminary. [2] Used principally for distilled spirits. [3] Principally corn grits & flakes. *Source: Internal Revenue Service*

Eggs

U.S. egg production increased 0.5 percent in 1980 from 1979 to 5,805 million dozen, the second largest output after the record production of 5,846 million dozen in 1971. Almost all of the production increase occurred during the first quarter of 1980 and was partly caused by the extra day of production because of leap year. As a result of the culling of older hens during the first half of 1980 due to declining profits, production was off 1 percent in the second quarter and was about even with 1979 levels in the third and fourth quarters. Production during 1981 was expected to be near the 1980 level.

As a result of unprofitable operations during most of 1980, egg producers reduced the number of replacement pullets entering the laying flock during the year and kept hens in production longer. The 1980 hatch of egg-type chicks was off 8.4 percent from 1979 and was a reflection of the reduced pullet replacement demand.

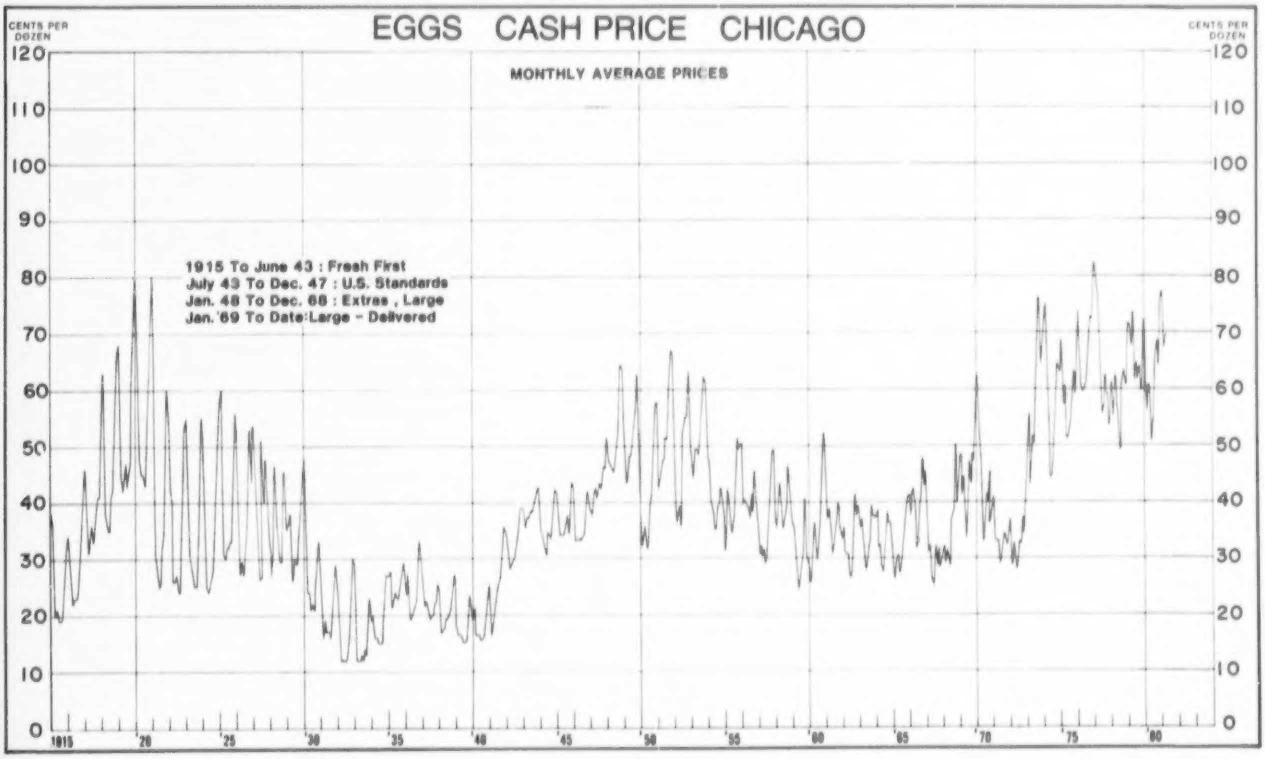
U.S. per capita consumption of eggs in 1980 declined about 1 percent from 1979, due primarily to strong export demand. Exports in 1980 increased to 142.9 million dozen, up nearly 84 percent from 1979. Exports were especially strong in the fourth quarter, up 98 percent compared to the same quarter in 1979. However, exports still only accounted for 3 percent of fourth quarter production. Japan is the largest export market for U.S. eggs but the Middle East is becoming increasingly important. The EEC is projected to increase its egg production 2 percent in 1981 and may provide increased competition for Middle East sales.

Egg breakings under federal inspection increased during 1980 to 780 million dozen vs. 701 million in 1979 as stocks of frozen eggs remained low. Liquid egg production increased 1 percent, frozen egg production decreased 2 percent and dried egg production increased 2 percent from 1979. Cold storage holdings of frozen egg products on February 1, 1981 totaled 24 million pounds, up 2 million pounds from the previous year, but still low compared with stocks in the early 1970's.

Prices for cartoned Grade A large eggs averaged 66.6 cents a dozen in New York during 1980, about 2 cents below 1979. Most of the decline was in the first half of the year when prices were 9 cents per dozen below 1979 prices. Prices then strengthened in the summer and averaged 6 cents above the previous year. In January 1981, prices averaged 76 cents and declined in February 1981 to 71 cents per dozen which was 11 cents above February 1980. Prices are expected to weaken seasonably through the spring of 1981, but reduced supplies of meat may limit the decline.

Futures Market

Egg futures are presently listed (but not actively traded) on the Chicago Mercantile Exchange.



EGGS

World Production[2] of Eggs In Billions of Eggs

Year	Argentina	Australia	Bel. & Lux.	Brazil	Canada	Israel	France	W. Germany	Italy	Japan	Netherlands	Poland	Spain	U.S.S.R.	Un. Kingdom[3]	United States
1969	2.9	2.3	4.0	*1967-71*	5.6	1.2	11.2	14.7	10.3	27.9	4.4	6.7		37.2	15.6	67.5
1970	3.0	2.6	4.4	*Avg.*	5.9	1.3	11.4	15.4	11.1	30.0	4.6	6.9		40.7	15.1	68.5
1971	3.1	2.9	4.0	*(5.3)*	5.9	1.4	11.5	15.4	10.4	30.0	4.4	7.1		45.1	14.9	70.1
1972	3.4	3.4	3.9	5.8	5.6	1.4	11.5	16.1	10.6	30.5	4.4	7.5		47.9	14.6	69.5
1973	3.1	3.3	3.7	6.0	5.5	1.5	12.3	15.5	11.6	31.1	4.7	7.4		50.8	12.9	66.6
1974	3.4	3.3	3.8	6.0	5.5	1.6	12.5	15.0	11.3	30.2	4.8	7.9		55.5	14.4	65.9
1975	3.8	3.4	3.7	6.0	5.4	1.7	13.1	15.0	11.4	29.8	5.3	8.0		57.4	13.6	64.4
1976	3.7	3.2	3.5	6.1	5.2	1.8	12.9	14.4	11.5	31.0	5.6	8.0		55.6	14.0	64.8
1977	3.1	3.3	3.8	6.3	5.5	1.7	13.1	14.8	11.3	31.4	6.0	8.5	10.9	61.2	14.1	64.9
1978	3.3	3.5	3.8	6.6	5.5	1.8	13.5	14.3	11.0	32.8	7.0	8.5	10.1	64.5	14.3	67.3
1979[1]	3.4	3.4	3.5	7.2	5.6	1.8	13.8	13.3	11.0	33.2	8.2	8.7	11.2	65.6	14.4	69.2
1980[4]	3.4	3.4	3.3	8.0	6.0	1.6	14.5	13.1	10.8	33.0	8.8	8.8	10.8	67.7	14.3	69.5
1981																

[1] Preliminary. [2] Relates to farm production in Canada and the United States, but information for many countries is not explicit on this point. [3] Farm production, years ending May. [4] Forecast. *Source: Foreign Agricultural Service, U.S.D.A.*

Salient Egg Statistics in the United States

Year	Hens & Pullets: On Farms Jan. 1[10]	Hens & Pullets: Avg.[9] Number During Year	Rate of Lay Per Layer: On Farms Jan. 1[2]	Rate of Lay Per Layer: During Year[3]	Eggs: Farm Prod.	Eggs: Price Per Dz.	Eggs: Consumed[4] on Farms	Eggs: Sold	Gross Income[5] Billion $	Total Egg Prod.[6]	Imports[7]	Exports[8] & Shipments	Used for Hatching	Civilian Consumption: Total	Civilian Consumption: Per Capita Eggs
	Millions	Millions	Number	Number	Billions		Billions	Billions		Million Dozen	Million Dozen	Million Dozen	Million Dozen	Million Dozen	
1972	321.4	304.5		227	69.2	30.9	.69	68.53	1.78	5,742	1	56	391	5,237	304
1973	300.7	290.6		227	66.0	52.5	.63	65.41	2.89	5,502	13	49	392	5,051	291
1974	296.6	284.7		230	65.6	53.2	.58	65.04	2.91	5,461	13	57	366	5,005	286
1975	286.0	278.1		232	64.6	52.4	.54	64.09	2.82	5,382	5	62	372	4,924	280
1976	279.9	274.1		235	64.5	58.3	.50	64.01	3.13	5,377	3	65	409	4,868	274
1977	280.0	274.9		235	64.6	55.6	.48	64.13	2.99	5,407	14	91	429	4,862	272
1978	287.7	281.6		239	67.2	52.7	.46	66.68	2.92	5,607	11	120	463	5,012	278
1979[1]	291.7	288.6		240	69.2	58.1	.44	68.67	3.36	5,777	10	104	496	5,163	284
1980[1]	295.5	285.2		244	69.7	56.4				5,805	6	167	496	5,124	279
1981															

[1] Preliminary. [2] Number of eggs produced during the year divided by number of hens & pullets on hand Jan. 1. [3] Number of eggs produced during the year divided by the average number of hens & pullets of laying age on hand during the year. [4] Consumed in households of farm producers. [5] Value of sales plus value of eggs consumed in households of producers. [6] Farm production, plus nonfarm output estimated at 10% of farm through 1954; thereafter, 1 percentage point less each year. [7] Shell-egg equivalent of eggs and egg products. [8] Shell eggs & shell equivalent of frozen & dried egg products. [9] Average number of layers on farms during the year. [10] Of laying age. *Source: Agricultural Marketing Service, U.S.D.A.*

Average Wholesale Prices of Shell Eggs (Large) Delivered; Chicago In Cents Per Dozen

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1971	37.2	33.2	33.1	33.0	29.1	29.8	33.0	34.5	32.9	32.4	33.5	37.0	33.2
1972	30.0	28.8	32.8	29.5	28.0	29.4	33.0	32.7	37.3	34.4	40.2	49.8	33.8
1973	55.9	43.1	49.9	51.9	50.5	58.2	65.1	76.9	70.0	64.6	67.8	72.8	61.0
1974	75.0	69.5	62.1	54.2	44.5	44.6	50.5	57.5	64.6	63.2	63.0	68.8	59.8
1975	63.7	57.4	60.7	51.6	51.3	51.7	53.9	59.7	63.3	59.1	66.8	73.8	59.4
1976	70.9	64.2	59.5	58.6	60.7	60.9	65.4	70.6	72.8	70.6	76.7	82.3	67.8
1977	78.7	75.6	67.5	62.5	55.7	57.0	62.8	59.3	59.3	53.7	55.1	61.5	62.4
1978	55.2	62.8	62.0	57.0	52.0	49.3	61.2	61.8	63.2	60.8	67.2	71.7	60.3
1979	71.3	67.7	73.5	68.7	61.9	64.8	61.9	64.0	62.0	59.7	66.3	72.4	66.2
1980	59.9	56.3	60.6	56.8	50.8	54.6	63.2	65.9	68.8	64.3	75.7	77.3	62.9
1981	71.4												

Source: Commodity Economics Division, U.S.D.A.

Total Eggs—U.S. Supply and Distribution In Millions of Dozen

Year & Quarters	Supply				Utilization					
							Domestic Disappearance			
									Civilian[1]	
	Production	Imports[1]	Beginning Stocks[1]	Total Supply	Ending Stocks[1]	Exports & Shipments[1]	Eggs Used for Hatching	Military	Total	Per Capita (Number)
1976 I	1,352	[2]	28.2	1,380	23.1	15.2	104.6	13.1	1,224	69.2
II	1,337	.1	23.1	1,360	23.6	15.9	108.1	10.8	1,202	67.8
III	1,335	1.4	23.6	1,360	23.3	18.0	96.4	9.3	1,213	68.2
IV	1,353	1.0	23.3	1,377	20.7	16.2	97.4	12.2	1,231	69.1
1977 I	1,326	1.1	20.7	1,348	19.9	16.1	109.3	7.6	1,195	67.0
II	1,338	6.0	19.9	1,363	25.0	23.2	112.6	10.9	1,192	66.7
III	1,333	6.9	25.0	1,365	27.1	26.8	102.6	10.0	1,199	66.9
IV	1,411	.2	27.1	1,438	23.7	24.6	104.7	7.8	1,277	71.1
1978 I	1,379	1.4	23.7	1,404	18.1	37.4	113.2	6.6	1,229	68.3
II	1,396	3.3	18.1	1,417	21.0	30.0	122.4	7.0	1,237	68.6
III	1,385	6.7	21.0	1,413	23.1	24.9	111.9	7.4	1,245	69.0
IV	1,449	.1	23.1	1,472	20.4	28.0	115.4	6.9	1,302	71.9
1979 I	1,424	.4	20.4	1,445	16.7	24.4	125.4	5.8	1,273	70.1
II	1,436	2.2	16.7	1,455	18.1	22.7	133.5	7.0	1,274	70.0
III	1,438	4.2	18.1	1,461	19.2	25.4	118.8	6.4	1,291	70.8
IV	1,479	2.7	19.2	1,500	18.9	31.2	118.0	6.0	1,326	72.6
1980 I	1,466	1.1	18.9	1,486	18.4	35.8	127.2	6.4	1,298	70.9
II	1,425	1.6	18.4	1,445	23.7	37.3	127.4	5.7	1,251	68.1
III	1,432	1.9	23.7	1,457	23.8	39.9	118.9	6.7	1,268	68.9
IV	1,483	1.4	23.8	1,508	19.4	53.9	122.7	5.3	1,307	70.9
1981[3] I	1,450									
II										

[1] Shell eggs & the approx. shell-egg equivalent of egg product. [2] Less than 100,000 dozen. [3] Forecast.
Source: Commodity Economics Division, U.S.D.A.

Shell Eggs: Civilian Per Capita Disappearance in the United States Number of Eggs

Year	Shell Equivalent													Processed[2]	Total
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total[1]		
1971	24.7	21.6	23.9	23.1	23.7	22.1	22.9	23.1	21.9	23.3	22.8	24.2	278	36	314
1972	24.5	22.3	24.2	22.9	22.7	21.1	22.6	22.2	21.6	22.2	21.7	23.6	272	36	308
1973	23.4	20.5	23.1	22.4	22.5	20.8	21.4	21.2	20.7	21.4	21.5	23.1	262	32	294
1974	22.8	19.8	22.2	21.0	21.2	20.2	20.7	20.9	20.3	20.9	20.6	22.1	254	34	288
1975	22.0	19.4	21.9	20.4	20.6	19.2	20.1	20.6	19.9	20.9	20.9	21.7	248	31	279
1976	21.7	19.6	20.5	19.6	20.5	19.2	20.1	20.1	19.3	20.3	19.5	20.8	241	33	274
1977	20.9	17.9	20.1	19.2	19.4	18.1	19.1	19.1	19.0	20.7	20.2	21.4	235	37	272
1978	21.1	18.6	20.8	20.0	20.3	18.8	19.7	19.8	19.7	20.9	20.7	21.9	242	36	278
1979	21.7	18.9	21.4	20.4	20.6	19.6	20.4	20.4	20.2	20.7	20.6	22.2	247	36	283
1980[3]	21.5	19.4	21.3	19.9	20.2	19.1	19.5	20.1	19.8	20.3	20.4	21.2	243	36	279
1981															

[1] Monthly totals do not necessarily add to yearly figures due to rounding. [2] Liquid, frozen, & dried egg (egg solids) converted to shell egg equivalent. [3] Preliminary. *Source: Economic Research Service, U.S.D.A.*

Egg-Feed Ratio[1] in the United States

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1971	8.0	7.4	7.3	7.3	6.7	6.4	6.4	7.1	7.1	6.9	7.2	8.2	7.2
1972	7.1	7.0	7.6	6.5	6.4	6.4	7.0	6.9	7.7	6.9	8.0	8.7	7.2
1973	9.0	7.3	7.7	7.9	6.9	6.4	7.1	8.3	8.6	8.2	8.6	8.5	7.9
1974	8.8	8.4	7.5	7.0	6.2	5.8	6.2	5.7	6.7	6.5	6.6	7.2	6.9
1975	7.2	7.2	7.6	6.5	6.5	6.3	6.4	6.8	7.5	7.1	8.1	9.0	7.2
1976	8.6	8.2	7.4	7.3	7.5	6.8	6.8	7.6	7.7	7.8	8.7	9.1	7.9
1977	8.5	8.1	7.3	6.8	5.9	5.8	6.7	7.2	7.6	7.1	7.3	7.4	7.1
1978	6.7	7.5	7.4	6.7	6.3	5.6	6.4	7.0	7.3	7.0	7.5	8.0	7.0
1979	7.8	7.7	8.0	7.4	6.9	6.7	6.1	6.1	6.4	6.1	6.8	7.3	6.9
1980[2]	6.6	5.9	6.3	6.0	5.3	5.5	5.7	6.0	6.2	5.7	6.0	6.6	6.0
1981[2]	5.9	5.7	5.7	6.0									

[1] Pounds of laying feed equivalent in value to one dozen eggs. [2] Preliminary. *Source: Commodity Economics Division, U.S.D.A.*

EGGS

Hens and Pullets of Laying Age in the U.S., First of Month In Millions

Year	Jan. 1	Feb. 1	Mar. 1	April 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1970	317.5	315.0	314.1	312.3	310.6	307.3	306.9	306.9	310.2	316.8	320.2	323.4
1971	326.6	321.6	317.7	315.6	311.9	309.5	306.5	307.1	309.1	311.9	317.1	318.0
1972	321.4	320.1	315.5	312.0	304.3	301.0	298.7	300.1	299.8	300.9	302.2	300.2
1973	300.7	299.5	296.8	297.6	292.3	288.0	283.2	283.3	288.6	291.2	294.4	293.8
1974	296.6	296.1	295.5	292.3	286.9	282.9	279.9	279.0	277.8	279.6	282.3	286.0
1975	286.0	283.5	281.3	277.9	273.7	271.1	270.0	270.0	272.7	276.1	278.2	279.7
1976	279.9	279.6	278.0	274.9	270.3	269.1	268.0	681.1	271.9	273.8	276.3	279.7
1977	280.0	276.8	275.0	273.8	270.2	268.4	266.2	268.5	274.3	279.4	282.6	286.6
1978	287.7	283.7	280.7	279.7	278.2	277.3	275.0	275.2	279.0	283.9	288.3	293.3
1979	291.7	292.1	290.2	288.6	285.5	283.4	283.7	285.1	287.2	290.2	291.7	294.9
1980[1]	296.0	293.6	288.6	284.3	280.6	279.6	279.9	282.2	287.7	291.8	292.8	293.3
1981[1]	293.7	290.4	289.9	284.8								
1982												

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

U.S. Cold Storage Holdings of Shell Eggs, 1st of Month In Thousands of Cases (One Case = 30 Dozen)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1970	51	46	79	83	61	111	157	147	98	178	136	76
1971	51	60	52	139	80	101	98	148	141	134	135	94
1972	60	39	49	85	101	191	229	234	200	247	173	85
1973	41	117	87	97	37	39	73	54	62	86	72	67
1974	34	23	42	59	66	86	89	95	78	70	73	52
1975	36	32	48	32	26	68	82	84	80	72	55	40
1976	22	14	21	26	26	22	23	34	45	50	32	25
1977	28	29	42	40	42	34	40	39	47	50	52	50
1978	39	34	27	25	36	29	26	26	48	43	23	35
1979	38	22	18	24	20	27	24	32	28	31	24	24
1980[1]	38	47	24	22	30	47	51	39	28	39	15	19
1981[1]	31	22	19	30								
1982												

[1] Preliminary. *Source: Crop Reporting Board U.S.D.A.*

Cold Storage Holdings of Frozen Eggs in the United States, on First of Month In Millions of Pounds[1]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1972	73.8	71.6	71.1	71.1	74.6	80.4	85.4	88.1	88.4	83.9	80.4	76.2
1973	68.1	57.2	53.4	48.9	45.9	44.4	45.7	47.9	48.7	52.6	54.1	48.5
1974	43.2	37.7	35.7	39.4	43.6	49.6	55.6	59.1	63.4	65.6	64.7	60.1
1975	54.2	52.1	51.0	46.7	42.8	44.7	47.8	52.1	51.9	51.0	46.6	42.2
1976	36.3	31.7	28.7	29.4	29.7	28.9	30.1	31.6	31.0	28.7	28.9	25.5
1977	26.1	26.9	24.9	24.6	25.3	28.0	31.4	35.1	35.4	33.7	33.4	31.2
1978	29.7	27.0	25.5	22.9	22.9	22.2	26.6	28.0	28.7	28.7	27.6	25.6
1979	25.3	25.5	24.5	21.1	21.7	21.6	22.8	25.9	24.7	24.1	25.6	23.4
1980[2]	23.4	22.1	23.8	23.4	25.9	26.6	28.6	29.4	30.7	29.7	29.2	25.4
1981[2]	24.3	24.5	24.2	22.6								
1982												

[1] Converted on basis 39.5 pounds frozen eggs equals 1 case. [2] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

Egg Production in the United States In Millions of Eggs

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total[2]
1972	6,080	5,717	6,154	5,905	5,977	5,699	5,822	5,759	5,519	5,692	5,517	5,696	69,219
1973	5,706	5,196	5,807	5,649	5,777	5,451	5,500	5,458	5,323	5,561	5,455	5,685	66,039
1974	5,691	5,203	5,810	5,596	5,718	5,454	5,520	5,442	5,237	5,422	5,305	5,529	65,620
1975	5,560	5,001	5,514	5,301	5,425	5,230	5,387	5,402	5,252	5,448	5,313	5,506	64,626
1976	5,511	5,171	5,543	5,327	5,449	5,269	5,404	5,383	5,229	5,422	5,297	5,515	64,511
1977	5,447	4,917	5,546	5,361	5,478	5,213	5,310	5,369	5,318	5,592	5,534	5,803	64,602
1978[1]	5,743	5,106	5,700	5,559	5,723	5,460	5,541	5,574	5,495	5,751	5,685	5,948	67,157
1979[1]	5,892	5,290	5,909	5,721	5,862	5,648	5,798	5,810	5,653	5,881	5,797	6,064	69,209
1980[1]	6,045	5,593	5,955	5,715	5,799	5,582	5,706	5,751	5,724	5,951	5,798	6,046	69,683
1981[1]	5,992	5,396	5,981										
1982													

[1] Preliminary. [2] Dec. 1 previous year thru Nov. 30. *Source: Crop Reporting Board, U.S.D.A.*

Egg-Type Chicks Hatched by Commercial Hatcheries in the United States In Millions

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1972	39.1	41.6	48.0	53.0	52.0	42.9	38.6	37.5	36.0	37.9	32.4	32.4	491.4
1973	38.6	41.5	52.0	54.0	55.4	44.7	41.2	42.5	42.9	46.0	40.3	35.3	534.3
1974	35.1	37.7	46.2	54.6	52.1	43.4	36.7	34.9	32.1	35.5	33.0	32.2	473.4
1975	34.8	36.6	45.5	47.4	48.0	40.9	38.1	34.9	33.9	34.8	28.4	30.7	453.8
1976	35.8	39.6	50.1	51.5	48.2	42.4	38.6	38.3	37.7	37.0	36.3	36.6	492.2
1977	40.3	40.9	51.3	55.1	52.5	44.7	37.4	37.8	37.4	37.6	34.5	32.5	501.9
1978	36.9	36.9	46.8	50.9	53.7	45.6	35.8	38.6	37.2	37.7	35.6	35.9	491.6
1979	39.9	39.5	50.1	52.4	55.9	47.8	42.8	41.9	36.6	39.5	37.5	36.4	519.0
1980[1]	38.1	42.0	45.9	46.6	46.6	41.6	37.3	37.4	36.7	36.6	32.6	35.3	487.0
1981[1]	37.1	35.7	43.8										
1982													

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

Eggs Laid Per Hundred Layers in the United States In Number of Eggs

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1970	1,814	1,653	1,881	1,857	1,921	1,832	1,868	1,843	1,759	1,809	1,762	1,834	21,821
1971	1,854	1,702	1,913	1,873	1,947	1,879	1,910	1,880	1,802	1,863	1,813	1,880	22,316
1972	1,896	1,799	1,962	1,916	1,975	1,900	1,944	1,920	1,837	1,887	1,826	1,890	22,752
1973	1,901	1,742	1,954	1,915	1,991	1,908	1,941	1,908	1,836	1,899	1,847	1,917	22,759
1974	1,920	1,759	1,977	1,932	2,007	1,938	1,975	1,955	1,879	1,930	1,870	1,937	23,079
1975	1,952	1,771	1,971	1,920	1,990	1,933	1,995	1,990	1,915	1,966	1,905	1,968	23,280
1976	1,970	1,855	2,005	1,954	2,020	1,962	2,016	1,994	1,917	1,971	1,906	1,971	23,541
1977	1,956	1,782	2,021	1,971	2,034	1,950	1,986	1,978	1,921	1,990	1,944	2,021	23,554
1978	2,009	1,808	2,035	1,993	2,061	1,979	2,016	2,012	1,954	2,011	1,955	2,033	23,867
1979	2,018	1,817	2,042	1,994	2,062	1,992	2,038	2,030	1,958	2,021	1,976	2,052	24,000
1980[1]	2,050	1,921	2,079	2,023	2,070	1,995	2,031	2,018	1,990	2,036	1,975	2,057	24,245
1981[1]	2,052	1,857	2,081										
1982													

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

Electric Power

Total U.S. production of electricity by utilities in 1980 was approximately 2.286 billion kilowatt hours, according to Federal Power Commission data. This 1.7 percent above 1979 production of 2.247 billion kilowatt hours, continuing an uptrend in annual output dating back to 1946. Coal accounted for 50.8 percent of 1980 electricity production by electric utilities; natural gas, 15.1 percent; petroleum, 10.7 percent; hydro, 12.1 percent; and nuclear, 10.9 percent.

Sales of electricity to all ultimate consumers in 1980 were reported by the Federal Power Commission at a record-large 2,094 billion kilowatt hours, up 1.1 percent from the 2,071 billion kilowatt hours consumed in 1979.

Trends in Primary Resource Consumption

Electric utility consumption of coal (mostly bituminous) increased in 1980 to 569.2 million short tons, compared with 527.1 million in 1979. Electric utility petroleum consumption (steam, gas turbine, internal combustion, and coke) decreased 20 percent to about 421.5 million barrels from 523.6 million a year earlier. Consumption of natural gas by electric utilities in 1980 approximated 3,680 billion cubic feet, continuing the rebound from the low point reached in 1976, according to Federal Power Commission data.

Trends in Primary Resource Stocks

At the end of 1980, electric utility total coal stocks totaled 183.0 million short tons, up from 159.7 million a year earlier. Petroleum stocks at the end of December 1980 at 135.6 million barrels were nearly 3 percent higher than a year earlier.

World Electricity Production In Billions of KWH

Year	Australia	Brazil	Canada	Czechoslov.	France	W. Germany	Italy	Japan	Norway	Poland	Sweden	Switzerland	South Africa	Un. Kingdom	United States	U.S.S.R.
1968	46.5		176.4	41.6	117.9		104.0	265.1	59.7	N.A.	56.2	30.6	43.1	223.8	1,436	638.7
1969	51.2		191.1	43.1	131.5		110.4	304.2	57.0	N.A.	58.1	29.7	46.2	239.1	1,553	689.1
1970	56.1		204.7	45.2	140.7		117.4	349.9	57.6	N.A.	60.6	33.2	50.8	249.2	1,640	740.9
1971	58.0		216.5	47.2	155.8		124.9	385.6	63.6	69.3	66.6	32.8	55.0	256.4	1,718	800.4
1972	60.9		240.2	51.4	170.9		135.3	428.5	67.6	76.5	71.7	31.3	59.1	263.6	1,853	857.4
1973	64.8		263.3	53.5	182.4		145.5	470.3	73.1	84.3	78.1	37.2	64.5	281.9	1,965	914.6
1974	69.8	72.4	280.3	56.0	188.2	311.7	148.9	459.0	76.7	91.6	75.1	37.4	70.1	273.1	1,967	975.8
1975	73.9	80.3	273.4	59.3	185.3	301.8	147.3	475.8	77.5	97.2	80.6	43.0	74.9	272.0	2,003	1,039
1976	79.6	88.6	294.0	62.7	203.1	333.6	163.5	511.8	82.2	104.1	86.4	36.2	79.1	276.9	2,123	1,111
1977	82.5	99.9	317.2	66.3	210.7	335.3	166.5	532.6	79.7	109.4	90.0	45.9	80.2	283.3	2,211	1,150
1978	88.5	112.6	335.7	69.1	226.7	353.4	175.0	564.0	81.1	115.6	92.9	42.3	84.8	287.7	2,286	1,200
1979[1]	93.7	122.8	352.3	67.9	241.1	374.2	184.9	581.4	89.0	127.5	110.1	42.7	92.2	299.9	2,251	1,265
1980[2]	98.0		320.5	72.6	234.0	362.0	185.0	525.0	82.0	132.0	115.0	45.0	96.0	280.0	2,100	1,280
1981																

[1] Preliminary. [2] Estimate. *Source: United Nations*

Installed Capacity, Capability & Peak Load of the U.S. Electric Utility Industry In Millions of Kilowatts

Year	Installed Generating Capacity at Dec. 31										Capability at Winter Peak Load	Non-Coincident Winter Peak Load	Margin of Reserve (%)	Generation	Load Factor (%)
		Type of Prime Mover			Type of Ownership										
	Total Electric Utility Industry	Hydro	Gas Turbine & Steam[2]	Internal Combustion	Investor Owned	Cooperatives	Sub-Total Gov't.	Municipal Utilities	Federal	Power Districts, State Projects					
1968	291.1	51.2	233.1	4.0	220.8	3.4	66.9	19.4	35.0	12.5	288.8	226.7	17.2	1,327	63.5
1969	313.3	52.8	233.1	4.2	240.1	4.3	68.9	20.0	36.1	12.8	311.5	236.6	16.6	1,446	64.1
1970	341.1	55.1	252.4	4.4	262.7	5.2	73.2	20.9	38.7	13.6	339.1	248.6	19.0	1,536	63.9
1971	367.4	55.9	259.7	4.5	286.9	5.4	75.1	21.8	39.7	13.7	366.7	261.7	20.9	1,617	63.2
1972	399.6	56.6	322.9	4.8	314.9	6.7	78.0	23.2	40.6	14.2	394.1	291.0	19.6	1,752	62.5
1973	439.9	61.8	352.1	4.9	346.5	7.3	86.1	25.0	44.5	16.6	433.2	295.1	20.8	1,869	62.0
1974	476.0	63.6	375.7	5.0	376.1	7.5	92.4	27.3	45.8	19.2	467.4	302.5	27.2	1,872	61.2
1975	508.4	65.9	397.6	5.1	399.0	9.1	100.2	28.8	50.1	21.3	492.5	331.1	34.3	1,920	61.4
1976	531.2	67.8	415.2	5.3	415.5	9.9	105.7	30.6	51.7	23.4	511.0	349.9	34.5	2,040	62.6
1977	560.4	63.8	436.4	5.3	438.4	10.9	111.1	34.3	53.2	24.6	537.6	360.2	30.2	2,132	61.4
1978	579.3	71.0	449.2	5.5	453.6	11.6	114.0	34.4	54.3	25.3	561.6	383.1	33.7	2,219	62.1
1979[1]	598.4	75.4	463.0	5.5	464.1	13.8	120.5	34.5	58.3	27.6	569.2	380.7	36.1	2,267	62.9
1980															

[1] Preliminary. [2] Nuclear Power for 1970–79; 6.5, 8.7, 15.3, 21.1, 31.7, 39.8, 42.8, 49.9, 53.5, 54.6. *Source: Federal Power Commission*

Available Electricity & Energy Sales in the United States In Billions of Kilowatt Hours

	Generation						Sales to Ultimate Customers								
	Electric Utility Industry										Commercial & Industrial[3]				
Year	Hydro	Steam	Nuclear	Total[5]	Other Sources[2]	Total	Total Million $	Total[4]	Residential	Inter-Departmental	Small	Large	Street & Highway	Other Public Authorities	Railways & Railroads
1968	222.5	1,089	12.5	1,329	107	1,436	18,580	1,202	367.7	3.6	265.2	518.8	10.3	32.2	4.5
1969	250.2	1,173	13.9	1,442	111	1,553	20,139	1,307	407.9	4.2	286.7	557.2	10.8	35.9	4.5
1970	247.5	1,256	21.8	1,532	108	1,640	22,066	1,391	447.8	4.7	312.8	572.5	11.2	37.8	4.6
1971	266.3	1,302	38.1	1,613	103	1,716	24,725	1,466	479.1	4.9	333.8	592.7	11.7	39.8	4.5
1972	272.6	1,416	54.1	1,750	105	1,854	27,921	1,578	511.4	5.1	361.9	639.5	12.2	43.2	4.4
1973	271.6	1,495	83.3	1,856	103	1,959	31,663	1,703	554.2	5.5	396.9	687.2	12.8	42.3	4.2
1974	300.9	1,446	113.7	1,866	102	1,968	39,127	1,701	555.0	5.4	392.7	689.4	13.3	40.7	4.3
1975	300.1	1,439	172.5	1,918	85	2,003	46,853	1,733	586.1	5.4	418.1	661.6	13.9	43.6	4.3
1976	283.7	1,558	191.1	2,038	87	2,125	53,463	1,850	613.1	6.4	440.6	725.2	14.4	45.6	4.3
1977	220.4	1,648	250.9	2,124	88	2,212	62,610	1,951	652.3	7.2	469.2	757.2	14.4	46.2	4.2
1978	280.4	1,645	276.4	2,206	79	2,300	69,853	2,018	679.2	7.1	480.7	782.1	14.8	49.5	4.3
1979[1]	279.8	1,708	255.0	2,247	71	2,318	77,692	2,079	694.3	7.4	493.5	815.6	14.8	49.5	4.2
1980[6]							90,000	2,090	710.0	6.8	470.0	790.0	14.7	48.7	4.3
1981															

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[1] Preliminary. [2] Includes generation of industrial and railway electric plants. [3] The dividing point between small and large light and power is 50 kilowatts of demand. [4] Also includes interdepartmental (averages about 600 million kwh). [5] Includes internal combustion. [6] Estimate. *Sources: Federal Power Commission; Edison Electric Institute*

Electric Power Production by Electric Utilities in the U.S.[2] In Billions of Kilowatt Hours

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1968	121.7	113.2	115.1	109.5	114.9	119.4	127.8	132.2	116.1	119.7	118.0	128.4	1,436
1969	131.7	117.8	126.1	117.3	123.3	129.8	143.7	142.6	128.7	129.4	125.6	136.7	1,553
1970	141.1	124.7	132.3	126.5	130.5	137.2	149.7	151.5	139.8	132.7	130.9	141.0	1,638
1971	145.6	131.3	141.4	130.7	133.7	150.5	153.9	154.2	145.9	139.5	138.9	148.0	1,714
1972	153.0	145.5	148.9	140.5	146.5	154.4	166.7	171.8	155.8	152.5	152.4	163.1	1,851
1973[2]	159.3	143.1	147.8	139.3	147.0	161.0	173.5	177.0	156.3	153.8	147.8	153.3	1,860
1974	156.9	142.4	149.9	141.9	153.4	156.0	177.9	173.8	152.2	151.9	149.8	153.3	1,867
1975	164.2	147.0	155.5	146.2	153.2	162.4	176.8	179.7	155.1	154.8	152.7	169.3	1,916
1976	178.3	156.7	164.2	153.2	157.4	173.3	186.4	186.4	165.0	163.6	169.0	183.1	2,036
1977[1]	196.3	162.8	168.6	156.9	169.3	180.8	198.9	196.1	176.2	166.4	167.1	184.2	2,124
1978[1]	197.3	173.7	173.2	159.7	175.2	187.4	202.6	205.6	185.6	175.6	176.3	191.7	2,204
1979[1]	209.5	186.3	183.0	169.5	178.2	186.7	202.4	204.9	180.6	179.8	177.4	188.9	2,247
1980[1]	200.0	188.7	187.5	168.6	175.7	189.4	216.1	215.4	191.5	178.5	178.6	195.4	2,285
1981													

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[1] Preliminary. [2] Data prior to 1973 are production by UTILITIES & INDUSTRIAL ESTABLISHMENTS.
Source: Federal Power Commission

Use of Fuels for Electric Generation in the United States

	Consumption of Fuel									
Year	Coal (Thousand Short Tons)	Fuel Oil (Thousand Barrels)[2]	Gas (Million Cubic Feet)	Total Fuel in Coal Equivalent (Thousand Short Tons)	Net Generation by Fuels[3] (Million Kw. Hr.)	Lbs. of Coal Per Kw. Hr. (Pounds)	% of Total Net Fuel Generation	Average Cost of Fuel Per Kw. Hr. (¢)	Heat Rate BTU Per Kw. Hr.	Cost Per Million BTU Consumed (¢)
1968	297,779	188,642	3,147,909	475,475	1,093,614	.870	96.7	.27	10,371	26.3
1969	310,641	251,027	3,487,642	517,937	1,177,127	.880	96.2	.28	10,457	27.2
1970	320,818	335,504	3,931,996	573,152	1,261,474	.909	96.4	.33	10,508	31.3
1971	327,878	396,438	3,975,972	599,766	1,307,310	.918	95.9	.40	10,536	37.5
1972	352,391	493,663	3,976,762	647,968	1,421,136	.912	95.6	.43	10,479	41.1
1973	388,190	559,842	3,640,756	688,043	1,498,958	.918	96.1	.50	10,429	48.4
1974	392,344	536,140	3,429,072	685,115	1,449,079	.946	95.6	.93	10,481	89.0
1975	406,032	506,081	3,157,591	686,236	1,441,611	.952		1.12	10,383	108.3
1976	448,431	555,583	3,080,627	740,112	1,558,951	.950		1.20	10,369	115.3
1977	477,215	623,656	3,190,571	798,425	1,648,775	.969		1.38	10,449	131.8
1978	481,624	635,829	3,188,370	811,814	1,646,163	.986		1.53	10,495	145.3
1979[1]	527,317	523,256	3,490,517	837,372	1,708,029	.981		1.62	10,470	155.4
1980										

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[1] Preliminary. [2] 42-gallon barrels. [3] Excludes wood & waste fuels. *Source: Federal Power Commission*

Fertilizers (Nitrogen, Phosphate, and Potash)

U.S. fertilizer use was expected to increase in 1980/81 because of larger planted wheat acreage, anticipated heavier nitrogen use on corn and lower-than previously expected phosphate prices. The U.S. Fertilizer Institute, in February 1980, projected total U.S. farmer fertilizer use in the 1980/81 crop year (the fertilizer crop year is from July to June 30) at more than 55 million tons, versus a previous record level of 52.6 million in 1979/80.

Fixed Nitrogen

Ammonia, the primary raw material in the manufacture of nitrogenous fertilizers, is made from natural gas and naptha. As of late 1979, almost 70 percent of the world's ammonia production was based on natural gas. In world trade, the U.S.S.R. has taken a leading role in the production of ammonia which it trades for the nitrogen phosphates it must import. This leadership is facilitated by the availability of natural gas in the Soviet Union. The United States and Canada together have 11 percent of world natural gas reserves; the Soviets, 35 percent.

In 1980, U.S. imports of ammonia from the U.S.S.R. exceeded 700,000 short tons. Other major U.S. import suppliers included Mexico, Canada, and Trinidad-Tobago, all countries having ready supplies of natural gas at below U.S. prices. While the future of international trade in nitrogen remains uncertain, it was thought that the United States could expect rising imports of ammonia from such countries.

U.S. production of nitrogenous fertilizers in 1980 was an estimated 3 percent over 1979. Consumption was expected to increase 4 percent in 1981, reflecting both a reduction of inventories and an increase in imports relative to exports. Price increases, reflecting both rising feedstock costs and the moderating effect of expanded imports, were estimated at 13 percent.

The production increase for 1981, and the annual rate for the 1980–85 period, was forecast at 3 percent and the consumption increase at 4 percent. Prices were expected to rise between 10 percent and 13 percent. The 11 percent annual price increase forecast for this 5-year period reflected the moderating influence of ammonia imports from low-cost producing countries. World consumption of nitrogenous fertilizer in 1980–85 was expected to increase at 6 percent a year overall, but at a rate of 8 percent to 10 percent in less developed countries.

March, 1981 anhydrous ammonia prices were 10 percent above December 1980 and 13 percent over March 1980. Prices were affected by higher petroleum/hydrocarbon feedstock costs, strikes at ammonia plants in Trinidad-Tobago, urea production shortfalls in Mexico and Indonesia, Soviet efforts to raise contract ammonia prices, and Indian and Chinese urea purchases.

Phosphate Rock

The United States continues to lead the world in phosphate production. While U.S. phosphate rock reserves are smaller than those of either Morocco or South Africa, the United States outproduces both countries because of its technology, degree of development, and proximity of raw materials.

U.S. production of marketable phosphate rock was estimated at 54.1 million tonnes in 1980, 5% more than the 51.6 million tonnes produced in calendar year 1979, according to the Bureau of Mines, U.S. Department of the Interior.

Phosphate rock sold or used in the U.S. was re-

World Production of Ammonia In Thousands of Short Tons of Contained Nitrogen

Year	Bulgaria	Canada	China	France	E. Germany	W. Germany	India	Italy	Japan	Mexico	Netherlands	Romania	Un. Kingdom	United States	USSR	Total
1976	1.0	1.3	4.5	2.0	1.2	2.1	2.1	1.3	2.5	.8	2.2	1.8	1.5	13.9	11.1	62.6
1977	1.1	2.0	6.2	2.2	1.2	2.2	2.2	1.3	2.5	.9	2.4	2.0	1.8	14.7	11.8	68.5
1978	1.1	2.2	7.4	2.2	1.3	2.2	2.4	1.6	2.7	1.4	2.4	2.5	1.8	14.2	12.5	72.8
1979[1]	1.2	2.7	7.9	2.3	1.3	2.3	2.9	1.6	2.3	1.5	2.4	2.6	1.8	14.9	13.4	77.2
1980[2]		2.2		2.5		2.5	2.9	1.6	2.1	1.6	2.4		1.8	16.2		81.4
1981																

[1] Preliminary. [2] Estimate. *Source: Bureau of Mines*

U.S. Salient Statistics of Nitrogen[1] (Ammonia) In Thousands of Short Tons

										Average Price ($ Per Sh. Ton)			
	Production				Apparent Consumption			Producer Stocks		Elemental			
Year	Elemental	Fixed	Imports Fixed	Exports (Ammonia)	Fixed (Ammonia)	Elemental	Fixed	Natural	Fixed	(Pipeline Gas)	(Bulk Liquid)	Fixed (Ammonia)	Ammonia F.O.B. Gulf Coast
1972	7,011	12,651			584	7,011	12,333	25	1,359	7.48	41.85	60.00	51.50
1973	8,229	12,641	271	741	588	8,229	12,720	13	713	7.20	43.07	65.00	51.50
1974	8,814	13,061	373	326	411	8,814	12,987		942	9.05	48.24	142.50	75.00
1975	9,142	13,609	662	289		9,141	13,223		1,698	11.13	57.96	190.00	
1976	10,464	13,856	599	361		10,463	13,939		1,850	11.76	57.22	185.00	125
1977	11,870	14,712	884	346		11,870	14,831		2,269	11.27	56.11	130.00	90
1978[1]	13,889	14,232	1,247	434		13,707	15,270		2,044	13.66	60.64	110.00	80–84
1979[1]	14,531	14,932	1,603	649		14,386	16,178		1,752	14.75	65.50	130.00	128–132
1980[2]		16,200	2,100	600			17,400		2,100				120–125
1981													

[1] Elemental, Fixed, & Natural Nitrates. [2] Estimates. *Source: Bureau of Mines*

ported at 54.2 million tonnes in 1980, 2% higher than the 53.1 million tonnes sold or used in 1979. U.S. exports for the year 1980, reported by the Bureau of Census, were 14.3 million tonnes, 3% less than the 14.8 million tonnes exported in 1979. Imports, principally from Morocco, totaled about 486 thousand tonnes in 1980 or 45% below those reported in 1979. Apparent U.S. consumption of marketable phosphate rock in 1980 was 40.4 million tonnes, 3% higher than the 39.2 million tonnes apparent consumption reported in 1979.

Phosphate exports in 1980 remained high despite the embargo on shipments to the Soviet Union. Shipments to other countries held phosphoric acid exports at about 1979 levels. Greater volumes of diammonium phosphate account for most of the growth in phosphate exports, with shipments increasing to India, Pakistan, China, Turkey, and Mexico. However, exports did not compensate for reduced domestic shipments; therefore, phosphate inventories were building up. Stocks held by U.S. producers at the end of January 1981 were 16 percent above a year earlier.

Potash

In the fertilizer crop year from July 1, 1979–June 30, 1980, the U.S. met nearly 75 percent of its potash needs by imports. In this 1979/80 crop year, Canada supplied about 94 percent of the U.S. imports, Israel about 4 percent. Domestic production 2.2 million tonnes in calendar year 1980) supplied the remaining potash consumed.

Apparent U.S. potash consumption in the 1980/81 crop year was expected to reach a record 6.3 to 6.5 million tons. However, in the crop year period through January, 1981, the rate of imports was lagging the previous year's pace by about 4 percent. Combined U.S. and Canadian inventories in January 1981 were 32 percent above the January 1980 level, reflecting higher potash production coupled with lower demand.

Potash production in Canada in 1979/80, all muriate, increased 11% over that of the 1978/79 crop year to 7.1 million tonnes, according to the Potash & Phosphate Institute. Canadian overseas exports remained at 1.86 million tonnes according to the Institute. Exports to Brazil increased 27% to 0.43 million metric tons in crop year 1980. Brazil was the largest overseas importer of Canadian potash and Japan was the second largest. Domestic consumption of potash in Canada, mostly in the province of Ontario, increased 27% to about 0.37 million tonnes in crop year 1980.

World Production of Phosphate Rock In Thousands of Metric[3] Tons

Year	Brazil	China	Christmas Isl.	Israel	Jordan	Morocco	Nauru Island	Senegal	South Africa	Togo	Tunisia	United States	U.S.S.R.	Vietnam	World Total
1971	220	2,400	1,092	843		13,237	2.058	1,703	1,359	1,891	3,485	38,886	20,950	300	92,508
1972	331	2,900	1,269	1,033	765	16,650	1,474	1,561	1,380	2,126	3,734	40,831	21,750	310	99,287
1973	283	3,300	1,695	860	1,191	18,824	2,561	1,931	1,505	2,527	3,829	42,137	23,400	550	108,823
1974	361	3,300	1,945	1,131	763	21,739	2,522	2,070	1,564	2,835	4,200	45,686	24,800	1,300	121,240
1975[3]	406	3,400	1,391	882	1,352	13,548	1,534	1,801	1,646	1,161	3,481	44,276	24,150	1,400	107,531
1976	489	4,000	1,033	639	1,717	15,656	755	1,799	1,731	2,008	3,301	44,671	23,900	1,500	107,514
1977	650	4,000	1,186	1,227	1,782	17,572	1,146	1,871	2,403	2,857	3,615	47,256	24,250	1,500	116,568
1978	1,023	4,500	1,400	1,725	2,303	19,713	1,999	1,759	2,699	2,827	3,712	50,037	23,800	1,800	124,624
1979[1]	1,500	5,000	1,250	2,160	2,560	20,000	2,000	1,500	3,100	2,900	3,800	52,000	23,000	1,000	127,829
1980[2]						21,000		1,600	3,500	3,300	3,500	54,000			136,000
1981															

[1] Preliminary. [2] Estimate. [3] Data prior to 1975 are in THOUSANDS OF SHORT TONS. *Source: Bureau of Mines*

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FERTILIZERS (NITROGEN, PHOSPHATE AND POTASH)

U.S. Salient Statistics of Phosphate Rock In Thousands of Metric Tons

Year	Mine Production	Production Marketable	Imports for Consumption	Exports	Apparent Consumption	Stocks, Dec. 31	Price—$ Avg. Per Metric Ton (f.o.b. Plant)
1972		40,831	55	14,275	29,535	10,501	5.09
1973	126,720	38,218	59	12,585	28,328	8,482	6.24
1974	141,353	41,437	165	12,605	31,491	6,975	12.10
1975	170,077	44,276	33	11,131	31,022	9,021	25.35
1976	154,278	44,662	42	9,433	31,131	13,770	21.26
1977	166,893	47,256	158	13,230	34,365	13,682	17.39
1978	173,429	50,037	908	12,870	36,812	15,081	18.56
1979	185,757	51,611	886	14,358	39,591	14,357	20.26
1980[1]	209,883	54,415	486	14,276	40,791	13,768	23.10
1981							

[1] Preliminary. *Source: Bureau of Mines*

World Production of Marketable Potash In Thousands of Metric[3] Tons (K_2O Equivalent)

Year	Canada	Chile	China	Congo (Brazz.)	France	Germany		Israel	Italy	Spain	U.S.S.R.	United States	United Kingdom	World Total
						East	West							
1972	3,852	28		310	1,941	2,709	2,698	618	238	703	5,989	2,659		22,060
1973	4,698	28		297	2,494	2,818	2,809	585	148	522	6,523	2,603		23,855
1974	6,041	14		318	2,508	3,157	2,888	669	169	436	7,260	2,552		26,432
1975	5,992	13	330	315	2,116	3,328	2,450	789	155	506	8,757	2,501	17	27,269
1976[3]	4,996	15	150	254	1,603	3,161	2,036	680	330	630	8,310	2,177	41	24,386
1977	6,089	16	150	81	1,578	3,229	2,341	719	150	563	8,347	2,229	81	25,801
1978	6,124	17	150	—	1,795	3,323	2,470	732	249	558	8,193	2,253	136	26,000
1979[1]	6,600	15	150	—	1,850	3,400	2,600	725	240	590	7,500	2,225	450	26,345
1980[2]	7,350				1,900		2,700	800	240	600		2,400	500	27,505
1981														

[1] Preliminary. [2] Estimate. [3] Data prior to 1976 are in THOUSANDS OF SHORT TONS. *Source: U.S. Bureau of Mines*

U.S. Salient Statistics of Potash In Thousands of Metric[4] Tons (K_2O Equivalent)

Year	% Net Import of Consum.	Production	Sales by Producers	Imports for Consumption	Exports	Apparent Consumption	Producer Stocks Dec. 31	Average Price[3] ¢ Per Met. Ton
1971		2,587	2,592	2,766	564	4,794	428	34
1972		2,659	2,618	2,961	764	4,815	468	34
1973		2,603	2,865	2,587	889	5,563	206	36
1974		2,552	2,545	4,326	787	6,084	212	52
1975[4]	51	2,269	1,900	3,445	707	4,638	562	84
1976	61	2,177	2,268	4,168	857	5,578	471	73
1977	63	2,229	2,232	4,605	845	5,992	467	71
1978	64	2,253	2,307	4,707	809	6,205	414	76
1979[1]	66	2,225	2,388	5,165	635	6,918	251	95
1980[2]	62	2,400		4,950	900	6,450	250	130
1981								

[1] Preliminary. [2] Estimate. [3] Unit of K_2O, standard 60% muriate f.o.b. mine. [4] Data prior to 1975 are in THOUSANDS OF SHORT TONS. *Source: Bureau of Mines*

Flaxseed and Linseed Oil

The total United States flaxseed supply for the 1980/81 season which began on June 1, 1980 was estimated by the USDA at 15.1 million bushels, approximately 8 percent below the previous season's level. The estimated United States production for the 1980/81 season totaled 9.1 million bushels, about 40 percent below the 1979/80 production of 13.5 million, and the smallest crop since 1976. Beginning stocks for 1980/81 were estimated by the USDA at nearly 5.3 million bushels. United States imports for 1980/81 were estimated at 1.9 million bushels, approximately the same as for the previous season.

United States flaxseed crushings in the 1980/81 season were expected to total approximately 11.7 million bushels, with 0.8 million projected for seed use, less than 0.1 million for export, and end-of-season carryover at 2.5 milion. A crush of 11.7 million bushels would, on average, produce 234 million pounds of linseed oil and 216,000 tons of linseed meal.

In early 1981, the USDA's Foreign Agricultural Service projected 1980/81 world flaxseed production of 2.4 million tonnes, an approximately 11 percent decrease from 1979/80 production. (The Foreign Agricultural Service uses a split year which includes Northern Hemisphere crops harvested in the late months of the first year shown combined with Southern Hemisphere crops harvested in the early months of the following year.) Early in 1981, large production increases for 1980/81 over last season's level were expected in India, while production decreases were projected for Argentina and Canada.

Prices received by farmers increased steadily in the 1980/81 marketing year from $5.88 per bushel in June 1980 to $7.56 in mid-January 1981. Linseed oil prices (raw, Minneapolis) rose slightly from the previous year's levels, from 32 cents in January 1980 to about 33 cents in January 1981. Linseed meal prices (34-percent protein, Minneapolis) ran above the previous season's level and rose from $132.00 per ton in June 1980 to $177.00 in December 1980.

Futures Market

Flaxseed futures are traded on the Winnipeg Commodities Exchange.

World Production of Flaxseed In Thousands of Metric Tons

Crop Year	Argentina	Australia	Brazil	Canada	Ethiopia	France	India	Mexico	Poland	Romania	Turkey	Uruguay	United States	U.S.S.R.	World Total
1968–9	510	20	28	500	60	22	438	10	65	30	12	56	685	485	3,033
1969–0	640	37	31	700	62	20	329	10	57	38	12	105	887	451	3,499
1970–1	680	31	22	1,243	64	19	469	30	65	42	7	64	751	404	3,995
1971–2	316	10	12	567	70	21	474	40	75	58	7	43	462	464	2,748
1972–3	330	11	12	448	69	18	530	10	54	51	6	29	353	413	2,446
1973–4	297	14	12	493	72	18	428	11	51	45	6	26	409	507	2,393
1974–5	381	33	10	351	72	6	564	20	40	39	7	39	358	388	2,416
1975–6	377	13	8	445	75	32	598	27	36	45	8	62	395	340	2,564
1976–7	750	12	7	277	50	16	431	8	49	50	7	46	199	337	2,347
1977–8	855	35	5	650	50	44	527	18	38	50	6	40	409	300	2,987
1978–9	630	16	6	571	50	44	514	16	50	50	6	31	277	250	2,472
1979–0[1]	743	16		815		35	270	16	24		6	60	305	250	2,664
1980–1[2]	620			465			525						206	250	2,363
1981–2															

[1] Preliminary. [2] Estimate. *Source: Foreign Agricultural Service, U.S.D.A.*

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FLAXSEED AND LINSEED OIL

Production of Flaxseed in the United States In Thousands of Bushels

Year	Crop Production Estimates					By States									
	July 1	Aug. 1	Sept. 1	Oct. 1	Dec. 1	Arizona	California	Iowa	Minnesota	Montana	North Dakota	South Dakota	Texas	Wisconsin	U.S. Total
1968	23,052	25,778	26,427	26,909	27,264	—	72	38	4,606	77	13,860	7,588	742	—	26,983
1969	30,476	34,183	35,131	36,094	36,448	—	120	19	5,820	169	18,438	9,063	1,300	—	34,929
1970	35,401	29,146	30,065	30,877	29,970	—	78	18	4,477	253	16,440	7,025	1,125	—	29,416
1971	20,212	20,814	20,011	20,011	18,653	—	—	18	3,480	64	9,041	5,525	70	—	18,198
1972	15,488	14,240	15,051	15,300	13,909	—	—	—	1,794	104	7,320	4,500	165	—	13,883
1973	—	15,431	15,904	15,904	16,437	—	—	—	3,119	56	7,576	5,577	80	—	16,401
1974	—	13,713	14,263	14,543	13,337	—	—	—	3,163	40	6,688	3,818	374	—	14,083
1975	—	16,272	16,140	15,746	14,557	—	—	—	2,875	38	7,700	4,460	480	—	15,553
1976	—	6,776	6,967	6,951	7,356	—	—	—	1,950	50	4,000	1,380	440	—	7,580
1977	—	15,466	16,011	16,249	16,105	—	—	—	3,190	35	7,500	4,290	90	—	14,280
1978	—	11,156	11,348	11,705	10,921	—	—	—	2,201	—	4,025	2,188	200	—	8,614
1979	—	11,847	12,501	13,255	13,539	—	—	—	2,219	—	5,980	3,770	45	—	12,014
1980[1]	—	7,060	7,700	7,940	8,128	—	—	—	1,563	—	3,100	3,445	20	—	8,128
1981															

[1] Preliminary, December estimate. *Source: Crop Reporting Board, U.S.D.A.*

U.S. Supply and Distribution of Flaxseed In Thousands of Bushels

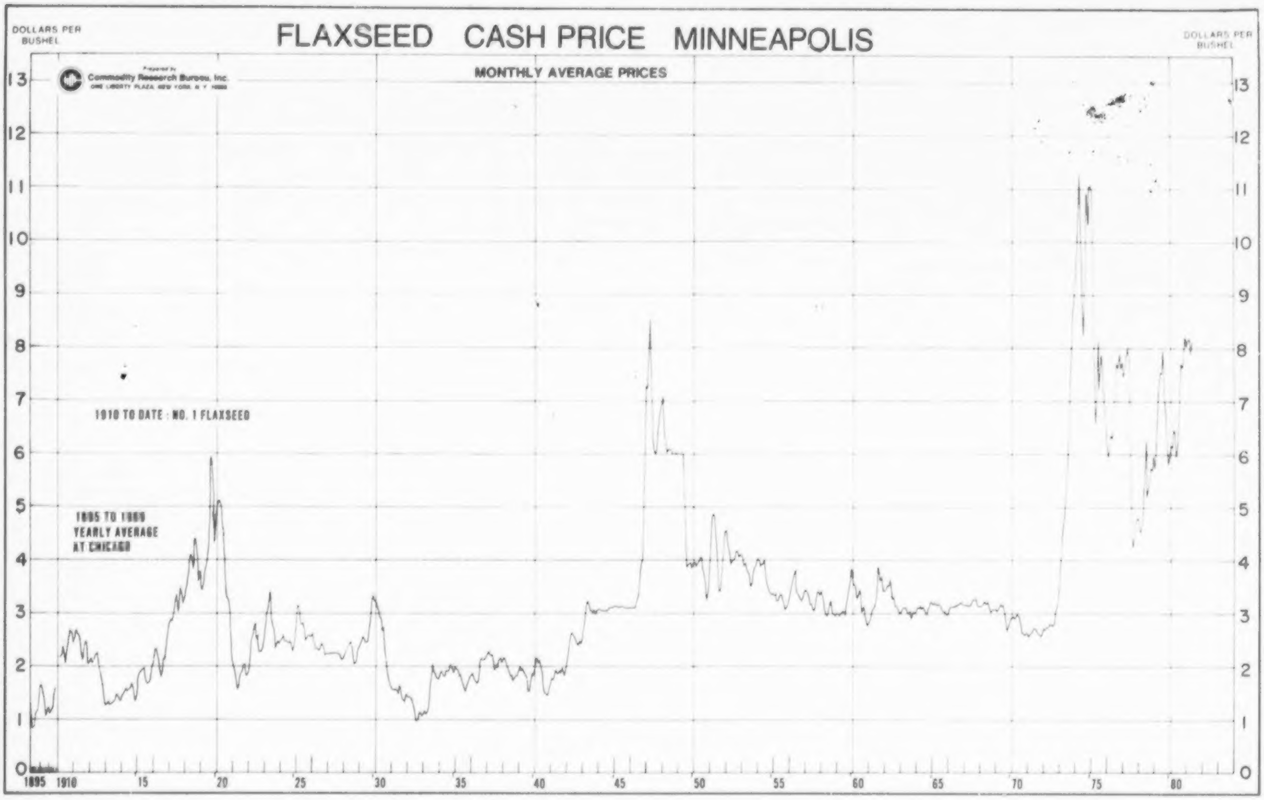
Year Beginning June	Supply							Distribution				
	Stocks, June 1											
	Farm	Terminal	All Other	Total Stocks[4]	Imports	Production	Total Supply	Seed	Crushing	Exports	Other[2]	Total Distribution
1968–9	1,304	5,664		8,631	1	26,983	35,615	1,968	14,436	9,531	—1,942	23,993
1969–0	2,085	7,706		11,622	0	34,929	46,551	2,265	14,289	6,505	452	23,511
1970–1	4,481	17,343		23,040	1	29,416	52,457	1,262	18,155	3,220	922	23,559
1971–2	3,174	23,605		28,898	74	18,198	47,170	933	21,022	910	1,102	23,967
1972–3	2,502	17,630		23,203	3	13,883	37,089	1,398	19,932	9,881	393	31,604
1973–4	403	3,103		5,485	399	16,408	22,292	1,360	17,203	630	—953	18,240
1974–5	658	1,885		4,052	130	14,083	18,265	1,231	13,386	372	245	15,234
1975–6	1,120	1,100		3,031	148	15,553	18,732	1,054	11,791	953	44	13,842
1976–7	1,830	3,060		4,890	2,168	7,580	14,638	1,043	10,677	196	−239	11,667
1977–8	1,070	1,934		2,961	859	14,280	18,100	557	11,615	1,001	−388	12,785
1978–9	2,890	2,606		5,315	1,557	8,614	15,486	724	13,009	91	−924	12,900
1979–0[1]	977	1,609		2,586	1,916	12,014	16,516	650	12,425	174	−1,998	11,251
1980–1[3]	2,928	2,337		5,265	1,717	8,128	15,110	840	11,700	70		12,610
1981–2												

[1] Preliminary. [2] Other disappearance represents cleaning loss, waste, and residual. [3] Forecasts. [4] Estimates prior to 1975. Derived from July 1 stocks by adding June crushings & exports. *Source: Statistical Reporting Service, U.S.D.A.*

Average Price Received by Farmers for Flaxseed in the U.S. In Cents Per Bushel

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Average[1]
1968–9	295	279	278	281	279	279	277	281	286	287	279	282	281
1969–0	273	266	257	264	261	264	264	262	264	266	250	259	265
1970–1	256	246	236	231	232	233	231	233	234	238	237	238	240
1971–2	234	234	231	225	227	237	241	242	244	249	249	250	238
1972–3	249	255	269	276	281	313	351	415	438	439	444	548	310
1973–4	572	675	729	766	810	863	936	1010	1080	927	883	776	756
1974–5	860	1080	977	1050	1060	1050	863	776	647	678	711	664	966
1975–6	755	722	682	666	560	570	537	587	574	588	554	669	657
1976–7	720	704	748	708	726	700	704	720	742	752	722	637	708
1977–8	514	415	420	456	420	432	421	407	441	485	532	589	454
1978–9	524	534	531	525	539	530	567	601	648	706	737	727	574
1979–0	690	642	634	556	545	561	551	579	594	551	604	588	596
1980–1	655	685	717	710	723	759	754	748	725	736			
1981–2													

[1] Season average includes an allowance for unredeemed loans. *Source: Crop Reporting Board, U.S.D.A.*



Flaxseed Crushings in the United States In Thousands of Bushels

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total
1970–1	861	1,456	1,807	1,536	1,346	1,374	1,579	1,596	1,741	1,811	1,832	2,007	18,946
1971–2	1,264	1,679	1,707	1,771	1,596	1,686	1,886	1,818	2,218	1,805	1,585	1,966	20,980
1972–3	1,660	2,016	2,036	1,768	1,775	1,455	1,646	1,279	1,337	1,386	1,568	1,979	19,944
1973–4	1,489	1,668	1,975	2,040	1,447	1,121	1,196	993	993	964	1,338	1,508	16,732
1974–5	1,321	740	1,482	1,856	1,590	1,514	861	696	759	488	571	811	13,386
1975–6	375	1,032	1,636	1,925	954	877	589	886	793	876	1,036	991	11,790
1976–7	1,090	818	1,020	1,002	624	1,134	913	698	723	650	1,014	1,059	10,677
1977–8	650	1,188	1,394	807	686	929	973	736	343	1,107	1,743	1,650	11,615
1978–9[1]	1,660	1,000	955	750	778	701	813	853					13,009
1979–0[1]				612	780	593	1,045						12,425
1980–1[1]													11,700

[1] Preliminary. *Source: Economic Research Service, U.S.D.A.*

FLAXSEED AND LINSEED OIL

Flaxseed Stocks in the United States In Thousands of Bushels

Year	On Farms				Off Farms				Total Stocks			
	Jan. 1	Apr. 1	June 1	Oct. 1	Jan. 1	Apr. 1	June 1	Oct. 1	Jan. 1	Apr. 1	June 1	Oct. 1
1975	3,946	2,668	N.A.	7,552	3,745	1,907	N.A.	6,228	7,691	4,575	3,031	13,780
1976	4,220	3,009	1,830	4,116	5,533	4,164	3,060	4,971	9,753	7,173	4,890	9,087
1977	2,853	2,070	1,070	9,292	4,375	2,879	1,934	4,307	7,228	4,949	3,004	13,599
1978	5,773	4,499	2,890	6,170	5,168	3,905	2,606	3,390	10,941	8,404	5,496	9,560
1979	3,446	2,349	977	7,449	4,027	3,039	1,609	2,999	7,473	5,388	2,586	10,448
1980[1]	4,909	3,967	2,681	5,583	4,723	3,249	2,337	3,200	9,632	7,216	5,018	8,783
1981[1]	3,252	2,158			3,423	2,252			6,675	4,410		

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

Average Price of No. 1 Flaxseed at Minneapolis In Dollars Per Bushel

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Average[1]
1969–0	2.88	2.69	2.77	2.90	2.92	2.94	2.90	2.92	2.97	2.97	2.89	2.83	2.90
1970–1	2.65	2.64	2.60	2.62	2.63	2.58	2.62	2.63	2.71	2.72	2.70	2.68	2.66
1971–2	2.62	2.61	2.58	2.64	2.71	2.70	2.74	2.74	2.78	2.80	2.80	2.79	2.69
1972–3	2.85	3.00	3.08	3.14	3.41	3.90	4.52	4.75	4.84	5.12	5.93	6.37	3.94
1973–4	7.36	7.89	8.71	8.82	9.22	10.06	10.67	11.29	9.87	8.67	8.26	9.25	8.93
1974–5	10.92	10.33	11.04	11.08	10.97	8.76	7.70	6.60	7.39	8.15	7.23	7.88	9.12
1975–6	7.69	7.25	6.64	6.18	6.09	5.93	6.36	6.30	6.40	6.67	7.31	7.70	6.71
1976–7	7.63	7.91	7.61	7.71	7.46	7.54	7.63	7.82	7.99	7.76	6.10	5.17	7.36
1977–8	4.26	4.41	4.79	—	4.80	4.61	4.51	4.78	5.30	5.78	6.25	5.22	4.97
1978–9	5.47	5.76	5.70	5.99	5.75	6.17	6.63	7.22	7.54	7.51	7.98	7.23	6.58
1979–0	7.00	6.71	6.12	5.84	6.16	6.14	6.47	6.44	5.95	6.24	6.50	7.15	6.39
1980–1	7.70	7.65	7.82	8.23	8.04	8.17	8.19	7.93	8.11				

[1] Weighted average by carlot sales. *Source: Economic Research Service, U.S.D.A.*

World Exports of Linseed Oil from Specified Countries In Thousands of Metric Tons

Year	Argentina	Ireland	Belgium Lux.	Canada	France	W. Germany	India	Morocco	Japan	Netherlands	Switzerland	United Kingdom	United States	Uruguay	World Total
1969	166.8	.6	0	4.0	1.2	15.3	.2	.8	.8	4.9	.1	3.2	17.4	20.7	235.1
1970	168.4	.7	0	12.6	1.7	18.5	—	—	1.5	4.8	.6	5.7	21.9	30.5	267.0
1971	206.8	.4	4.1	11.0	1.7	17.8	—	—	3.4	7.3	1.0	3.7	21.1	18.4	297.0
1972	123	.6	5.1	16.1	1.9	33.2	—	—	1.5	13.0	—	3.7	84.8	6.0	286.1
1973[1]	99	.6	5.5	6.1	3.6	32.1	—	—	.7	23.5	—	3.5	96.4	11.6	279.7
1974[1]	80		1	1									53	6	
1975[1]	84		4	4									40	10	
1976[1]	113		5	5									9	17	
1977[1]	199		6	6									12	14	

[1] Preliminary. *Source: Foreign Agricultural Service, U.S.D.A.*

Supply and Distribution of Linseed Oil in the United States In Millions of Pounds

Year Beginning June	Supply			Exports & Shipments	Domestic Disappearance								Per Capita Lbs.	Flaxseed (Oil Equivalent of Exports)[3]
					Drying Oil Products									
	Stocks June 1	Production	Total		Paint & Varnish	Linoleum & Oilcloth	Resins & Plastics	Other Inedible	Total	Lubricants & Similar Oils	Fatty Acids	Total		
1969–0	152	290	442	40	220	13	19	18	239	12	2	272	1.33	131
1970–1	130	363	495	47	209	8	19	19	239	13	1	261	1.26	64
1971–2	187	428	615	66	221	7	21	16	258	13	3	274	1.31	18
1972–3	275	393	668	256	224	11	25	21	270	14	—	285	1.35	200
1973–4	127	344	471	142	205	11	21	22	248	10	—	259	1.22	13
1974–5	71	263	334	143	112	3	11	12	134	8	—	142	.66	7
1975–6	49	231	279	42	154	—	10	9	173	10	4	187	.87	19
1976–7	49	217	266	14	126		13	8	156	9	8	164	.75	4
1977–8[1]	88	232	320	25	177		23	15		7	3	225	1.03	20
1978–9[2]	70	260	330	54										
1979–0[2]	44													

[1] Preliminary. [2] Estimate. [3] Based on 20 lbs. of linseed oil per bushel of flaxseed exports.
Source: Economic Research Service, U.S.D.A.

High, Low & Closing Prices of May Flaxseed Futures in Winnipeg In Dollars per Tonne

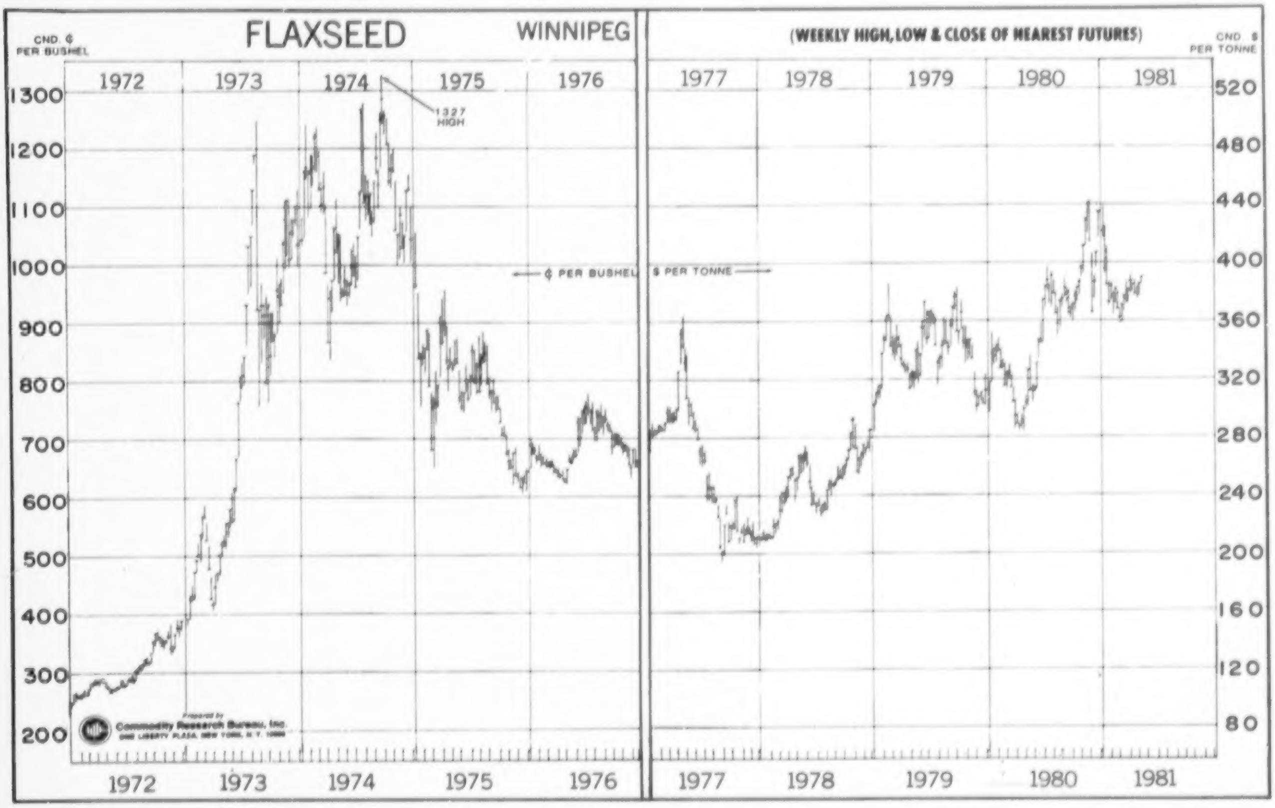
Year of Delivery		Year Prior to Delivery June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Delivery Year Jan.	Feb.	Mar.	Apr.	May	Life of Delivery Range
1978	High	—	263.60	247.50	242.90	247.00	230.50	229.00	217.00	221.00	246.50	261.00	271.30	271.30
	Low	—	246.00	200.50	216.40	214.90	215.00	210.50	208.70	211.00	217.40	236.00	243.00	200.50
	Close	—	251.10	218.00	227.00	221.70	218.40	210.50	210.60	216.60	242.50	250.80	271.30	—
1979	High	246.10	243.50	255.50	262.50	285.00	284.00	288.00	325.50	385.00	357.00	344.40	346.00	385.00
	Low	243.10	233.00	234.80	249.60	256.00	260.50	271.50	284.00	326.50	332.60	321.00	313.00	233.00
	Close	243.10	243.50	251.10	256.50	279.00	273.00	284.60	325.00	351.50	343.00	322.00	336.00	—
1980	High	356.50	345.50	354.00	355.00	356.40	341.50	332.00	351.50	347.50	330.30	295.50	336.00	356.50
	Low	302.00	312.50	316.50	325.00	315.50	319.30	317.00	297.00	315.00	295.50	284.00	292.00	284.00
	Close	333.00	319.50	331.70	348.00	319.00	330.70	318.00	337.60	316.00	296.20	293.00	307.60	—
1981	High	370.50	412.70	406.00	412.70	417.50	468.90	470.50	439.10	385.80	387.30	391.40		
	Low	327.50	365.00	367.00	391.50	387.00	413.00	395.70	371.00	364.00	358.00	376.30		
	Close	360.60	405.50	393.00	395.80	411.90	468.00	431.10	373.00	368.20	378.40	382.70		
1982	High													
	Low													
	Close													

Source: Winnipeg Commodity Exchange

Month End Open Interest of Flaxseed Futures in Winnipeg In 20 Tonne Units

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	3,250	3,820	4,293	5,229	5,964	5,576	4,671	5,460	5,019	5,999	5,551	5,596
1979	5,998	6,537	6,656	5,827	5,256	4,411	7,185	6,219	5,845	6,517	5,831	7,860
1980	8,319	9,117	8,790	9,210	8,059	7,460	9,606	10,414	8,728	9,656	10,455	11,786
1981	10,923	10,483	9,237	8,210								

Source: Winnipeg Commodity Exchange



FLAXSEED AND LINSEED OIL

Wholesale Price of Raw Linseed Oil at Minneapolis in Tank Cars In Cents Per Pound

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Average
1969–0	11.9	11.9	11.9	12.5	12.5	12.5	12.5	N.A.	11.0	11.0	12.2	12.2	11.9
1970–1	11.0	11.0	10.0	10.0	10.0	9.5	9.5	9.5	9.0	8.8	8.8	8.8	9.7
1971–2	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	9.5	8.9
1972–3	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	14.0	14.2	10.3
1973–4	15.0	N.A.	N.A.	N.A.	—	35.0	35.0	40.2	42.6	45.0	45.0	44.5	37.8
1974–5	44.0	44.0	47.0	48.5	48.5	48.5	46.2	44.0	44.0	44.0	44.0	44.0	45.6
1975–6	44.0	39.0	36.0	35.0	30.5	29.8	28.3	27.5	25.5	24.0	24.0	24.0	30.6
1976–7	25.4	27.0	27.8	30.0	30.0	30.0	30.0	30.0	28.0	28.5	28.5	28.5	28.6
1977–8	28.0	28.0	27.0	22.8	20.0	20.0	26.6	26.6	26.6	—	22.0	22.0	24.5
1978–9	22.5	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	30.0	30.0	24.9
1979–0	30.0	30.0	32.0	32.0	32.0	32.0	32.0	28.8	28.8	27.8	26.6	27.0	29.9
1980–1	27.0	28.6	29.0	29.2	29.0	29.8							
1981–2													

Source: Department of Agriculture

Linseed Oil Production (Crude, Raw) In Millions of Pounds

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total
1960–0	12.8	16.1	39.5	31.2	26.7	19.5	23.0	24.2	21.4	27.1	26.8	24.2	292.5
1970–1	17.5	29.1	36.2	30.7	26.8	27.5	31.9	32.4	34.9	36.7	36.8	41.4	381.9
1971–2	25.9	34.7	35.4	36.5	32.3	33.3	38.2	36.5	44.8	36.1	33.2	39.0	425.9
1972–3	33.2	40.4	41.1	34.0	35.0	28.2	31.3	25.1	26.5	28.5	30.2	39.9	393.4
1973–4	29.6	33.4	39.1	40.6	28.2	22.3	24.2	19.6	20.1	20.0	27.1	30.6	335.0
1974–5	24.8	14.6	29.2	36.5	32.2	29.8	16.5	14.2	13.9	9.5	10.9	15.2	247.3
1975–6	6.5	18.4	31.8	37.6	19.2	14.6	11.7	17.9	19.0	17.4	20.6	19.7	229.7
1976–7	21.8	16.4	21.0	20.6	12.5	22.7	19.3	14.0	14.7	13.0	20.9	21.2	216.5
1977–8	13.0	22.9	26.9	15.5	13.5	18.8	19.5	14.6	6.9	22.8	35.9	30.9	231.4
1978–9[1]	32.4	20.3	18.4	N.A.	16.9	14.6	16.1	N.A.	23.7	28.3	26.2	26.1	223.0
1979–0[1]	16.4	22.5	41.9	11.5	15.7	12.2	21.0	N.A.	29.3	30.6	14.8	19.3	235.2
1980–1[1]	14.5	19.3	28.7	17.1	29.5	18.8	27.0						
1981–2													

[1] Preliminary. *Source: Bureau of the Census*

U.S. Linseed Oil Domestic Disappearance In Millions of Pounds

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total
1969–0	17.0	17.0	16.2	17.1	13.8	13.9	13.6	15.0	14.6	16.7	17.1	18.6	190.6
1970–1	18.6	18.4	16.8	15.1	14.2	12.7	13.3	15.8	18.4	19.6	19.6	22.7	205.2
1971–2	17.9	19.4	18.0	17.6	15.3	16.0	17.3	17.6	19.0	19.7	22.5	24.3	224.6
1972–3	21.9	23.2	20.9	21.7	18.5	17.1	37.8	11.2	37.0	38.6	45.9	34.7	293.4
1973–4	25.4	30.1	9.9	31.8	19.4	12.0	31.2	14.3	15.8	15.7	18.6	30.3	254.5
1974–5	.5	9.5	37.3	10.2	16.8	2.5	9.1	11.4	13.0	9.5	5.9	16.6	128.6
1975–6	12.6	22.6	20.4	22.8	8.5	12.8	22.4	15.4	15.2	9.6	23.1	15.3	187.2
1976–7	22.2	11.1	15.3	15.8	8.6	12.0	14.7	15.9	20.1	6.8	20.9	21.9	163.5
1977–8	23.9	22.9	13.7	10.9	8.9	3.8	15.4	15.8	23.9	21.2	42.5	21.5	224.7
1978–9[1]	6.1	31.5	14.0	10.4	16.5	14.5	16.1	70.2	21.6	22.0	24.2	20.8	267.9
1979–0[1]	25.6	14.6	26.6	7.4	18.2	16.6							
1980–1[1]													
1981–2													

[1] Preliminary. *Source: Bureau of the Census*

U.S. Stocks of Linseed Oil (Crude & Refined) at Factories & Warehouses In Millions of Pounds

Year	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1	Jan. 1	Feb. 1	Mar. 1	April 1	May 1	June 1
1969–0	131.4	121.3	113.1	118.8	130.7	132.0	128.8	129.0	132.6	130.4	133.9	130.4
1970–1	128.7	112.8	117.1	130.0	134.9	144.9	148.5	157.5	170.5	180.7	192.8	187.2
1971–2	203.8	193.2	177.1	179.9	203.7	210.8	224.9	236.7	245.3	263.5	280.9	275.3
1972–3	276.6	263.8	253.3	259.2	258.4	246.3	253.6	225.3	224.1	177.3	153.0	127.1
1973–4	113.0	86.4	71.6	90.3	85.8	86.3	82.2	70.1	64.7	65.3	66.4	70.8
1974–5	59.2	69.4	60.2	48.2	58.9	47.6	71.5	69.2	67.0	56.0	49.8	48.6
1975–6	43.8	36.7	30.1	37.8	49.5	47.6	55.8	44.1	44.0	46.3	51.7	48.9
1976–7	47.6	42.7	48.0	53.5	58.1	59.7	70.2	89.9	87.8	82.3	88.4	88.1
1977–8	87.3	74.0	69.0	79.2	72.6	74.2	89.2	93.2	92.0	74.8	76.3	69.6
1978–9[1]	62.6	75.6	49.9	44.8	34.4	34.8	34.9	34.8	35.5	37.4	43.6	43.9
1979–0[1]	49.1	39.9	47.7	62.9	46.3	43.6	35.7	41.8	36.3			
1980–1[1]												
1981–2												

[1] Preliminary. *Source: Bureau of the Census*

Factory Shipments of Paints, Varnish and Lacquer in the U.S. In Millions of Dollars

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1970	179.0	197.6	241.2	236.0	251.8	281.1	255.8	254.7	256.4	220.6	185.9	177.0	2,737
1971	180.4	198.2	235.6	253.0	258.2	291.6	254.1	274.0	266.8	226.8	208.9	183.3	2,831
1972	209.6	226.0	261.0	252.7	285.8	292.4	257.6	286.4	269.0	254.0	224.7	190.0	3,009
1973	220.2	229.2	257.2	268.9	294.4	297.5	279.4	301.7	272.5	274.3	240.0	197.8	3,133
1974	243.8	246.3	279.5	315.9	342.3	349.5	345.5	363.8	338.8	343.2	280.4	223.3	3,672
1975	265.0	267.5	302.2	334.1	362.9	391.6	373.4	387.1	384.6	364.0	318.2	276.0	4,027
1976	305.0	361.0	396.2	419.1	434.0	477.3	423.6	455.4	420.7	370.7	342.9	280.0	4,686
1977	285.9	311.9	393.1	377.8	429.7	445.5	393.6	445.1	410.7	368.3	350.5	305.9	4,518
1978[2]	319.1	341.1	500.6	517.1	589.0	586.2	518.4	589.0	536.0	516.6	470.2	403.3	6,008
1979[1]	476.1	484.0	622.0	574.1	677.8	668.3	638.4	678.4	590.3	648.5	526.8	448.1	7,033
1980[1]	540.8	567.9	611.9	648.0	702.4	721.6	682.9	689.3	698.2	706.1	546.4	515.6	7,601
1981													

[1] Preliminary. [2] New series; not comparable with earlier data. *Source: Bureau of the Census*

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Gas

Marketed production of domestic natural gas in 1980 totaled 20,145.0 billion cubic feet (bcf), or 55.0 billion cubic feet per day, a 1.6 percent decrease from the 1979 daily rate of output. Production in Texas and Louisiana accounted for over 70 percent of the total marketed U.S. production in both 1979 and 1980. Total synthetic natural gas marketed production in 1980 totaled 0.186 billion cubic feet, versus 0.123 billion in 1980. Synthetic natural gas, a small part of total natural gas production, is a product obtained from petroleum hydrocarbons, and is easily substitutable for pipeline quality natural gas.

According to the Department of Energy (DOE), the total quantity of natural gas in U.S. storage facilities as of December 31, 1980 stood at 6,272 bcf, of which 3,628 bcf was base gas and 2,643 bcf was working gas. This compares with 6,297 bcf of total gas of which 3,537 bcf was base gas and 2,761 bcf was working gas, as of December 31, 1979. Base gas is the volume of gas needed as a permanent inventory to maintain adequate reservoir pressure and deliverable rates throughout the withdrawal season. The withdrawal season is the period when storage withdrawals are greater than storage injections, and typically runs from October to February or March. Working gas is the difference between total gas and base gas, and thus is available for withdrawal.

Domestic producer sales of natural gas in 1980 to major interstate pipeline companies were estimated by the DOE at 10,605 bcf, up 1 percent from 1979.

U.S. imports of natural gas during 1980 were estimated by the DOE at 994 bcf vs. 1,253 bcf in 1979.

Resource Development

The average monthly number of rotary rigs in operation in 1980 was 2,910, compared with the 1979 average of 2,177. Moreover, the December 1980 rotary rig count of 3,286 represented a record high, and it was surpassed by the January, 1981 rotary rig count of 3,386. In 1980, a total of 15,737 gas well completions was reported, compared with 14,681 in 1979.

Prices

Natural gas prices continued their upward movement in 1980. According to Federal Power Commission data, average prices for purchases from domestic producers (who are subject to governmental regulation) rose from 117.8 cents per thousand cubic feet in 1979 to 149.1 cents per thousand cubic feet in 1980.

World Natural Gas Production (Marketed Production[3]) In Billions of Cubic Feet

Year	Argentina	Canada	France	Germany East	Germany West	Iran	Italy	Mexico	Netherlands	Poland	Romania	United Kingdom	United States	USSR	Venezuela	Total
1970	212	2,277	243	14	460	71	465	481	1,107	183	884	398	21,921	6,990	349	37,590
1971	228	2,499	252	101	555	299	473	479	1,536	190	892	657	22,493	7,501	368	40,282
1972	218	2,914	260	179	637	448	501	496	2,052	206	976	939	22,532	7,818	388	43,525
1973	238	3,119	262	248	706	702	541	542	2,495	213	980	1,018	22,648	8,346	460	46,144
1974	256	3,046	269	273	713	786	540	561	2,957	203	1,012	1,230	21,601	9,201	476	46,229
1975	278	3,090	260	257	639	771	514	584	3,208	211	1,042	1,274	20,109	10,206	450	46,358
1976	291	3,097	250	305	658	759	553	578	3,436	237	1,136	1,316	19,952	11,334	480	48,306
1977	304	3,231	272	300	638	741	485	600	3,422	258	1,103	1,444	20,025	12,219	524	50,100
1978[1]	297	3,128	278	302	707	687	485	745	3,133	282	1,112	1,384	19,974	13,137	520	51,749
1979[2]													20,471			
1980[2]													20,145			

[1] Preliminary. [2] Estimate. [3] Comprises all gas collected & utilized as fuel or as a chemical industry raw material, including gas used in oilfields and/or gasfields as a fuel by producers. *Source: U.S. Dept. of Energy*

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Salient Statistics of Natural Gas in the United States

	In Billions of Cubic Feet														
	Supply				Disposition						Value		Avg. Value Delivered to Consumers—$ Ths. Cu. Ft.		
Year	Marketed Production	Withdrawals[4]	Imports (Consumed) (Bil. Nat. Gas Cu. Ft.)	Total Supply	Consumption	Exports	Stored	Extraction Loss	Adjustments	Total Disposition	At Wells[3] Million $	¢ Ths. cu. ft. At Wells	Residential	Commercial	Electric Utilities
1968	19,322	1,330	652	21,304	19,460	94	1,425		325	21,304	3,169	16.4			
1969	20,698	1,379	727	22,805	20,923	51	1,499		332	22,805	3,456	16.7			
1970	21,921	1,459	821	24,200	20,046	70	1,857		228	24,200	3,746	17.1	1.09	.82	.29
1971	22,493	1,508	935	24,935	22,677	80	1,839		339	24,935	4,085	18.2	1.15	.87	.32
1972	22,532	1,757	1,019	25,308	23,009	78	1,893		328	25,308	4,180	18.6	1.21	.92	.34
1973	22,648	1,533	1,033	25,213	22,966	77	1,974		196	25,213	4,894	21.6	1.29	.98	.38
1974	21,601	1,701	959	24,260	21,223	77	1,784	887	289	24,260	6,573	30.4	1.46	1.12	.51
1975	20,109	1,760	953	22,821	19,538	73	2,104	872	235	22,821	8,945	44.5	1.71	1.40	.77
1976	19,952	1,921	964	22,837	19,946	65	1,756	854	216	22,837	11,572	58.0	1.98	1.69	.98
1977	20,025	1,750	1,011	22,786	19,521	56	2,307	863	41	22,786	15,834	79.0	2.35	2.10	1.32
1978	19,974	2,158	966	23,097	19,627	53	2,278	852	287	23,097	18,085	90.5	2.56	2.30	1.48
1979[1]	20,471	2,047	1,253	23,772	20,241	56	2,295	808	372	23,772	24,114	117.8	2.98	2.77	1.81
1980[2]	20,145		994			55									
1981															

[1] Preliminary. [2] Estimate. [3] Total value of market production at the wellhead. [4] Withdrawals from underground storage. *Source: U.S. Dept. of Energy*

Natural Gas Consumed[2] in the United States In Billions of Cubic Feet

Year	Arkansas	California	Illinois	Kansas	Louisiana	Michigan	Missouri	New Mexico	New York	Ohio	Oklahoma	Pennsylvania	Texas	West Virginia	Indiana
1968	325	2,079	1,008	526	1,662	704	366	309	640	988	552	718	4,154	189	
1969	353	2,079	1,099	583	1,942	779	399	302	684	1,032	603	766	4,325	178	
1970	385	2,156	1,188	615	2,034	811	430	323	711	1,053	656	772	4,559	192	
1971	336	2,177	1,243	647	2,079	853	429	323	717	1,087	667	802	4,813	189	
1972	318	2,210	1,221	669	2,138	867	425	342	693	1,148	686	829	4,883	209	
1973	329	2,063	1,164	648	2,217	922	427	313	683	1,104	673	783	5,088	196	
1974	291	1,852	1,163	630	2,203	938	410	312	627	1,087	723	716	4,912	192	
1975	259	1,858	1,108	541	1,978	887	370	296	577	957	729	654	4,380	168	
1976	250	1,771	1,188	556	2,216	895	380	341	596	1,006	812	714	4,404	159	425
1977	230	1,772	1,167	507	2,191	741	367	230	562	847	767	668	4,143	145	398
1978	221	1,563	1,175	519	2,249	790	359	214	570	930	770	674	4,211	152	441
1979[1]	251	1,810	1,143	584	1,978	876	347	211	624	898	825	741	4,001	149	504
1980															

[1] Preliminary. [2] Includes volume of natural gas which is distributed as a component of mixed gas. *Source: U.S. Dept. of Energy*

United States Marketed Production[1] of Natural Gas In Billions of Cubic Feet

Year	Arkansas	California	Kansas	Alaska	Louisiana	Mississippi	Montana	New Mexico	Ohio	Oklahoma	Pennsylvania	Texas	West Virginia	Wyoming	Michigan
1968	157	715	836	89	6,416	135	19	1,164	43	1,391	88	7,495	237	248	
1969	169	678	883	81	7,228	131	41	1,138	50	1,524	79	7,853	232	304	
1970	181	649	900	78	7,788	126	43	1,139	52	1,595	77	8,358	242	339	
1971	172	613	885	73	8,082	119	33	1,168	80	1,684	76	8,551	234	380	
1972	167	487	889	126	7,973	104	33	1,216	90	1,807	74	8,658	215	375	
1973	158	449	893	131	8,242	100	56	1,219	94	1,771	79	8,514	209	358	
1974	124	365	887	129	7,754	79	55	1,245	92	1,639	83	8,171	202	327	
1975	116	318	844	160	7,091	70	41	1,217	85	1,605	85	7,486	154	316	102
1976	110	354	829	166	7,007	71	43	1,231	89	1,727	89	7,192	153	329	119
1977	104	311	781	188	7,215	83	47	1,203	99	1,770	92	7,051	153	330	130
1978	107	311	854	203	7,476	107	47	1,174	114	1,774	98	6,548	149	357	148
1979	109	248	798	221	7,266	144	54	1,181	123	1,835	96	7,175	151	414	160
1980[2]	112	264	732	226	6,937	165	54	1,142		1,892		7,169	152	382	153
1981															

[1] Comprises gas either sold or consumed by producers, including losses in transmission, quantities added to storage and increases of gas in pipelines. [2] Preliminary. *Source: U.S. Dept. of Energy*

GAS

United States Recoverable Reserves and Deliveries of Natural Gas In Billions of Cubic Feet

Year	Recoverable Reserves of Natural Gas Dec. 31[3]	Residential Deliveries	Commercial Deliveries	Industrial Deliveries: Field	Carbon Black	Petroleum Refineries	Used as Pipeline Fuel	Industrial	Other Consumers	Total Deliveries	Electric Utility Power[2] Plants
1968	287,350	4,450	1,801	2,065	105	974	591	6,330			3,144
1969	275,109	4,728	1,955	2,212	98	998	631	6,814			3,486
1970	290,700	4,837	2,057	2,305	86	1,029	722	7,116			3,894
1971	278,806	4,972	2,173	2,297	59	1,063	743	7,373			3,993
1972	266,085	5,144	2,279	2,364	59	1,071	766	7,364			3,979
1973	249,950	4,994	2,283	2,412	50	1,074	728	7,929			3,605
1974	237,132	4,786	2,263		40	1,040	669				3,429
1975	228,200	4,924	2,268		26	946	583				3,147
1976	216,026	5,051	2,383		28	919	548	6,967	285	17,764	3,078
1977[1]	208,878	4,821	2,243		28		533	6,817	257	17,329	3,189
1978[1]	200,302	4,903	2,310				530	6,757	291	17,449	3,188
1979[4]	194,600	4,965	2,485				601	6,899	301	18,141	3,491
1980											

[1] Preliminary. [2] Figures include gas other than natural (impossible to segregate); therefore, shown separately from other consumption. [3] Estimated proved recoverable reserves. [4] Estimated. *Source: U.S. Dept. of Energy*

Total Sales of All Types[2] of Gas To All Consumers in the United States In Millions of Therms

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1968	16,710	15,892	15,561	12,419	11,009	9,788	9,070	8,784	8,807	9,556	11,854	15,254	144,704
1969	17,844	16,400	16,368	13,753	11,240	10,089	9,882	9,545	9,466	10,306	12,899	16,105	153,897
1970	18,658	17,330	16,630	15,277	12,257	10,543	10,135	10,202	10,075	10,811	12,837	15,664	160,419
1971	18,868	18,735	17,690	15,586	13,117	11,447	10,528	10,369	10,232	11,004	13,052	16,179	166,795
1972	18,331	19,081	17,591	15,451	13,006	11,735	10,578	11,277	10,963	11,218	13,809	17,991	171,082
1973	19,094	17,528	16,453	15,001	13,321	11,438	11,048	10,690	10,631	11,365	13,067	15,163	164,799
1974	18,476	17,072	16,307	14,936	12,516	11,199	10,508	10,349	9,923	11,152	12,198	15,367	160,003
1975	17,095	16,336	15,884	14,553	11,208	9,448	9,247	9,348	9,354	10,092	11,028	15,036	148,629
1976	17,975	16,446	14,510	12,252	10,998	9,656	9,131	9,008	8,991	9,964	12,783	16,147	148,135
1977	19,019	16,827	14,257	11,684	9,748	9,045	8,758	8,665	8,607	9,767	11,535	15,498	143,409
1978[1]	17,798	18,194	15,989	12,420	10,364	9,105	8,213	8,090	8,086	9,204	11,531	15,503	144,497
1979[1]	19,251	19,238	16,305	13,563	10,746	9,394	9,037	9,209	8,913	10,389	12,534	15,870	154,404
1980[1]	18,279	19,156	17,873	13,734	10,697	9,416	8,838	8,942	8,840	10,047	12,785	16,677	155,284
1981													

[1] Preliminary. [2] Natural, Manufactured and Mixed Gas. *Source: American Gas Association*

Gas Utility Sales in the United States by Types & Class of Service In Millions of Therms

Year	Total Utility Sales	Type of Gas: Natural	Mfg.	Mixed	No. of Cust. (Mil.)	Class of Service: Residential	Commercial	Industrial	Other	Revenue—Mil. $: Residential	Commercial	Industrial	Other
1968	144,724	143,233		1,501	39.9	45,527	17,049	75,951	6,197	4,567	1,315	2,675	223
1969	153,916	152,374		1,536	40.9	48,204	18,781	81,358	5,573	4,883	1,459	2,919	219
1970	160,435	160,930		1,482	41.5	49,237	20,006	84,392	6,740	5,207	1,620	3,181	274
1971	166,857				42.2	50,401	21,555	86,455	8,447	5,635	1,829	3,569	324
1972	170,821				43.0	51,418	22,757	87,757	8,880	6,094	2,064	3,943	364
1973	164,799				43.7	49,936	22,808	83,708	8,347	6,247	2,172	4,197	371
1974	160,003				44.3	48,648	22,934	81,532	6,890	6,899	2,539	5,391	413
1975	148,629				44.6	49,910	23,868	68,371	6,480	8,445	3,303	6,718	608
1976	148,135				44.9	50,142	24,226	71,070	2,696	9,941	4,075	9,374	311
1977	143,409				45.7	49,463	24,094	67,107	2,746	11,541	4,980	11,385	397
1978	147,460				46.0	51,070	25,000	68,410	3,010	12,939	5,696	13,065	451
1979[1]	156,440				46.8	50,770	25,060	77,530	3,090	14,769	6,609	17,495	506
1980[2]	140,000				47.0	41,000	21,000	71,000	2,800	14,800	6,700	22,000	500
1981													

[1] Preliminary. [2] Estimate. *Source: American Gas Association*

Glass

Early estimated valuations of product shipments of flat glass projected $2.5 billion in 1981 shipments, a 19 percent increase over 1980. However, this projection assumed an upturn in the construction and automobile industries, the two primary users of flat glass.

The long-range outlook for flat glass consumption by the auto industry is unfavorable, because the industry is moving toward the production of smaller and lighter vehicles, with less glass area per car and thinner glass per window. However, the longer-range outlook for the construction industry is favorable because of increased use of flat glass for storm windows and insulated window units.

Glass container shipments were expected to reach 326 million gross in 1981, a gain of 2 percent over the estimated 1980 level of 319 million gross. Strong growth was expected in 1981 in the glass container market for beer, and improvement was anticipated in soft drink and food container shipments, based on predicted improvement in consumer buying power.

All Flat Glass Mfgr's Shipments in the U.S., by Quarters In Millions of Dollars

Year	1st	2nd	3rd	4th	Total	Year	1st	2nd	3rd	4th	Total
1972	131.0	131.4	137.2	145.4	544.9	1977[1]	165.6	182.8	192.8	198.8	739.9
1973	142.3	147.2	150.6	157.6	597.6	1978[1]	202.6	210.6	202.5	213.3	829.4
1974	146.0	149.5	135.4	112.6	543.4	1979[1]	210.2	205.3	216.1	226.6	858.1
1975	85.7	105.2	131.1	145.9	468.0	1980[1]	220.3	191.8	210.9	246.0	868.9
1976	153.8	160.1	159.5	171.4	644.8	1981					

[1] Preliminary. *Source: Bureau of Census*

Wholesale Price of Window (Single B[1]) Glass In Dollars Per 50 Square Feet

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1972	7.364	7.364	7.364	7.360	7.269	7.269	7.269	7.269	7.269	7.269	7.269	7.269	7.300
1973	7.269	7.269	7.720	7.720	7.720	7.720	7.720	7.720	7.720	7.720	8.428	8.658	7.782
1974	8.658	8.658	8.658	8.658	8.658	8.658	8.658	8.658	9.947	9.751	9.751	9.751	9.039
1975	9.751	9.751	9.751	10.143	10.143	9.555	7.806	7.806	7.806	8.279	8.208	8.208	8.934
1976	8.208	8.208	9.178	9.178	9.178	9.178	9.178	9.178	9.178	9.178	9.178	9.178	9.016
1977	9.300	9.553	9.553	9.553	9.675	9.675	9.675	9.675	9.675	10.023	10.390	10.390	9.761
1978	10.390	10.390	10.390	10.863	10.863	10.863	10.998	10.998	10.998	10.998	10.998	11.138	10.824
1979	11.138	N.A.	N.A.	N.A.	11.444	N.A.	N.A.	11.870	12.030	12.145	12.436	N.A.	11.844
1980	N.A.	12.436	12.152	12.152	N.A.	12.152	12.152	12.152	12.152	N.A.	12.642	N.A.	12.248

[1] 40 bracket, mfg. to jobber, carlots; f.o.b. factory freight prepaid. *Source: Bureau of Labor Statistics* (1311-0207.04)

United States Production of Glass Containers In Millions of Gross

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1972	20.4	21.8	23.2	21.9	23.2	24.5	22.7	24.6	21.2	24.4	21.0	18.6	268.5
1973	22.4	22.4	25.2	23.2	24.9	24.6	23.1	24.5	22.3	24.8	21.3	20.4	279.0
1974	24.4	20.8	25.1	23.4	23.1	25.3	25.0	26.0	22.8	25.7	21.6	17.1	280.4
1975	22.7	21.4	22.9	23.0	23.1	24.3	25.3	25.3	25.2	27.0	22.9	19.9	283.1
1976	23.8	24.1	26.2	24.7	26.2	26.6	25.1	28.6	24.3	27.6	24.2	21.0	302.5
1977	22.6	24.3	28.1	24.4	25.7	27.1	26.5	29.5	21.3	25.8	26.5	21.6	303.5
1978	26.0	25.4	28.9	28.8	29.2	28.8	26.9	29.4	26.2	30.0	25.7	21.4	327.6
1979	26.1	26.1	29.3	27.6	28.8	28.6	27.3	28.7	23.5	28.6	26.0	21.3	322.0
1980	27.3	28.1	28.6	27.2	26.6	27.1	27.3	28.6	26.5	29.1	25.1	21.0	322.5

Source: Bureau of the Census

United States Shipments (Domestic) of Glass Containers In Millions of Gross

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1972	19.3	20.3	26.1	19.3	23.7	24.4	21.5	25.2	22.1	22.1	20.8	20.1	266.0
1973	21.4	19.6	23.6	22.0	26.6	24.0	21.8	26.4	22.7	23.5	21.8	20.9	274.3
1974	23.7	22.7	28.6	22.6	19.8	22.2	24.6	27.7	22.1	21.1	19.4	19.1	273.7
1975	24.2	17.9	21.3	22.6	23.8	25.4	29.5	23.8	23.5	23.9	21.0	22.2	279.0
1976	22.6	21.5	31.4	20.4	24.1	25.3	24.6	27.3	27.7	22.7	21.8	22.9	292.3
1977	22.2	22.5	34.2	21.2	23.9	26.5	24.5	35.4	23.8	21.6	23.4	25.7	304.8
1978	21.1	22.0	27.4	26.5	34.0	27.2	24.5	29.5	27.7	27.4	25.5	22.8	317.4
1979	24.6	23.0	31.0	25.2	28.1	27.1	25.6	29.4	25.1	27.6	27.0	23.3	317.8
1980	24.8	25.2	28.6	24.9	25.6	27.7	28.5	28.8	30.1	26.6	23.2	23.2	317.1

Source: Bureau of the Census

Gold

The gold market in 1980 was influenced by cross-currents arising from shifts in interest rates, inflationary expectations, foreign exchange rates, and international tension.

The price of gold (New York, Engelhard Industries) began 1980 at about $560 per troy ounce and rose to a record-high $850 by January 21. The price subsequently dropped to $490 by May 1, increased gradually to a level of $711 by late September, and then declined to a low of $558 on December 11 and ended the year at $589.75 per troy ounce.

World mine production of gold in 1980 was estimated by the U.S. Bureau of Mines at 38.2 million troy ounces, compared with estimated production of 39.0 million ounces in 1979. Most of the reduction was accounted for by lower output in the Republic of South Africa, the world's largest gold producer.

U.S. production of gold in 1980 declined about 4 percent from the 970,000 ounces produced in 1979. About 40 percent of domestic gold output is recovered as a byproduct of base metal mining, chiefly copper. The production of byproduct gold from copper refineries fell significantly during the 4-month labor strike in the copper industry in 1980. Domestic consumption of gold in 1980 was about 3.0 million ounces, according to preliminary data of the U.S. Bureau of Mines, as the use of gold in all categories declined from the 1979 level of 4.71 million ounces in response to the steep rise in price.

Imports of gold into the U.S. in 1980, excluding coins, amounted to 4.9 million ounces in 1980, of which 41 percent came from Canada, 27 percent from the Soviet Union, 16 percent from Switzerland, and 16 percent from other countries. Imports of coins were estimated at 3.0 million ounces, of which about one half were South African Krugerrands. In addition, 2.2 million ounces of gold were delivered from the International Monetary Fund's (IMF) monthly auctions. (The May 7, 1980 IMF auction was the last in a 4-year series, during which 25 million ounces of gold were sold.) There were no public gold auctions by the U.S. Treasury during 1980. Net deliveries of gold bullion from foreign stocks at the New York Federal Reserve Bank were about 3.0 million ounces.

U.S. industry stocks of gold at the end of 1980 totaled about 1.1 million troy ounces, while futures exchange stocks were about 4.6 million ounces. The United States government is the largest single holder of gold, according to International Monetary Fund data, which placed U.S. government holdings as of the end of February, 1981 at 264.22 million troy ounces, far ahead of the 95.18 million ounces held by West Germany, the second largest holder, and the 83.28 million ounces held by Switzerland. Other government holdings as of that date (in millions of ounces) included: France—81.85, Italy—66.67, Netherlands—43.94, Belgium—34.18, Japan—24.23, Austria—21.11, Canada—20.96, and the United Kingdom—18.73. These totals do not include 103 million held by the IMF, or an estimated 83 million held jointly by EEC members as backing for the European Currency Unit.

Futures Markets

The major U.S. gold futures markets are: the Commodity Exchange, Inc. of N.Y. (Comex) and the International Monetary Market (IMM) of the Chicago Mercantile Exchange.

World Production of Gold (Mine Output) In Thousands of Fine Ounces (Troy Ounces)

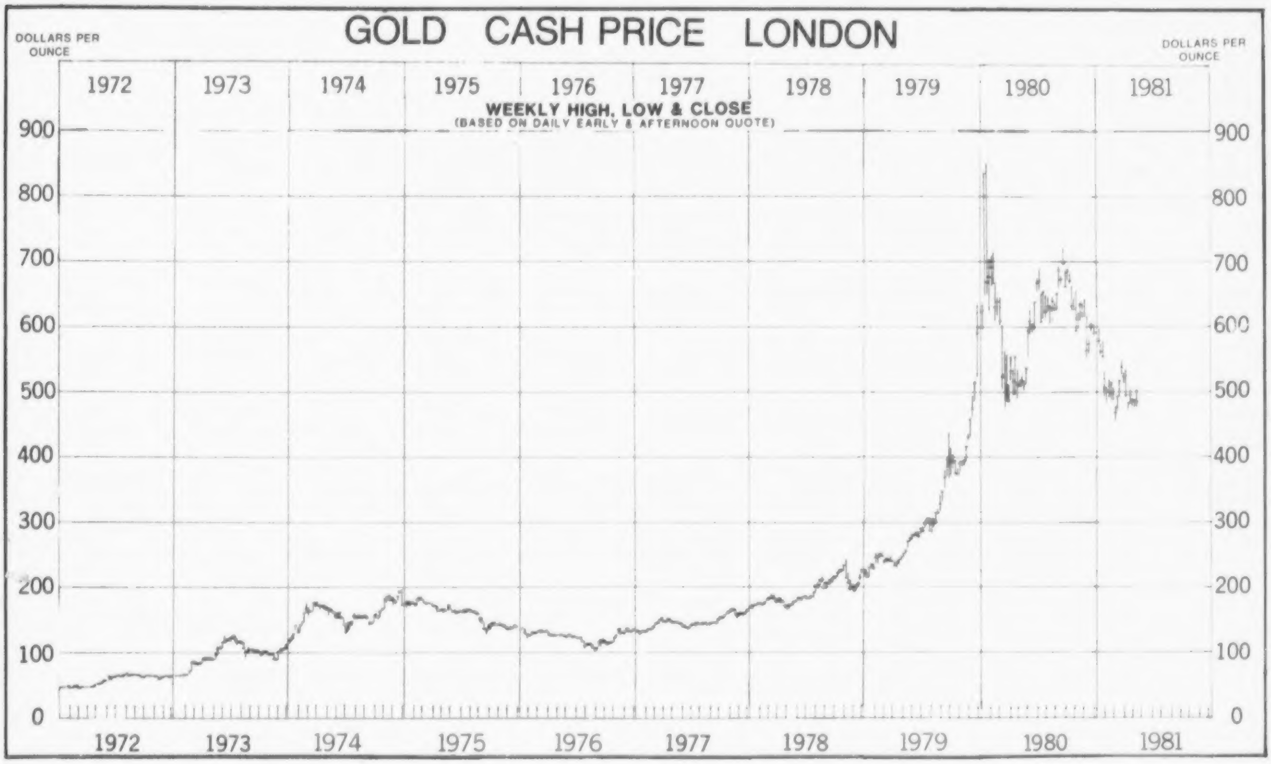
Year	Australia	Zaire (Congo)	Canada	Colombia	Ghana	India	Japan	Mexico	Nicaragua	Philippines	Rhodesia	South Africa	United States	U.S.S.R.[1]	Total World[1]
1969	722	176	2,545	219	707	109	246	181	120	571	480	31,276	1,733	6,250	46,612
1970	620	181	2,409	202	708	104	255	198	115	603	500	32,164	1,743	6,500	47,522
1971	672	172	2,243	189	698	119	255	151	121	637	502	31,389	1,495	6,700	46,495
1972	755	141	2,079	188	724	106	243	146	112	607	502	29,245	1,450	6,900	44,843
1973	554	134	1,954	216	723	105	188	133	85	572	800	27,495	1,176	7,100	43,297
1974	513	131	1,698	265	614	101	140	134	83	538	800	24,388	1,127	7,300	40,124
1975	527	103	1,654	309	524	91	144	145	70	503	600	22,938	1,052	7,500	38,476
1976	503	91	1,692	300	532	101	138	163	76	501	600	22,936	1,048	7,700	39,234
1977	630	80	1,734	263	481	97	149	213	66	558	600	22,502	1,100	7,850	39,121
1978[2]	648	76	1,735	258	402	88	145	202	66	587	640	22,649	999	8,000	39,304
1979[1]	588	75	1,581	290	482	85	133	188	60	547	700	22,617	970	8,160	39,000
1980[1]			1,600									21,500	930		38,200

[1] Estimated. [2] Preliminary. *Source: U.S. Bureau of Mines*

Monthly Average Gold Price (Unfabricated)—Engelhard Industries $ Per Troy Oz.

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1975	176.8	180.0	178.6	170.3	167.9	164.7	165.7	163.5	144.1	143.3	143.3	139.8	161.49
1976	125.3	131.7	133.1	128.4	127.4	126.2	118.0	110.1	114.7	116.6	131.4	134.4	124.77
1977	132.9	136.7	148.7	149.7	147.2	141.5	144.0	145.5	150.1	159.4	162.8	161.1	148.31
1978	173.7	178.6	184.1	175.8	176.5	184.1	189.3	206.3	212.4	227.7	206.2	208.1	193.55
1979	227.6	245.8	242.4	239.1	257.6	275.4	295.3	301.7	357.2	392.0	392.6	459.0	307.50
1980[2]	675.4	665.5	553.6	516.8	514.0	600.7	643.3	627.5	675.8	661.2	622.4	594.9	613.28
1981[1]	557.4	500.3	499.0	496.0									

[1] Estimate. [2] Preliminary. *Source: U.S. Bureau of Mines*



Salient U.S. Gold Statistics In Thousands of Troy Ounces

Year	Mine Production	Value Mil. $	Refinery Prod.		Exports[2]	General Imports[2]	Stocks, Dec. 31		Consumption				Price-$ Per Troy Oz.[4]
			New (Domestic)	Secondary			Treas. Dept.	Industrial	Dental	Industrial[3]	Jewelry & Arts	Total	
1968	1,478	58.0	1,539	N.A.	23,962	5,944		3,617	771	1,925	3,908	6,604	39.26
1969	1,733	71.9	1,717	2,920	338	5,861		4,158	710	2,560	3,839	7,109	41.51
1970	1,743	63.4	1,750	2,780	1,074	6,652		3,984	658	1,975	3,340	5,973	36.41
1971	1,495	61.7	1,437	2,202	1,339	7,201		4,375	750	1,884	4,299	6,933	41.25
1972	1,450	85.0	1,478	2,107	1,472	6,126		4,407	750	2,191	4,344	7,285	58.60
1973	1,176	115.0	1,210	1,779	2,985	3,845		4,498	679	2,577	3,473	6,729	97.81
1974	1,127	180.0	1,021	1,926	3,963	2,651		5,670	509	1,740	2,402	4,651	161.08
1975	1,052	169.9	1,093	2,696	3,496	2,662	274.7	788	595	1,059	2,080	3,993	161.49
1976	1,048	131.3	954	2,504	3,531	2,656	274.7	928	694	1,233	2,562	4,648	125.32
1977	1,100	163.2	956	2,454	8,671	4,454	277.6	1,976	728	1,209	2,658	4,863	148.31
1978	999	193.3	962	3,085	5,509	4,690	276.4	1,672	706	1,313	2,651	4,738	193.55
1979[1]	970	282.8	795	2,898	16,499	4,630	264.6	947	611	1,403	2,649	4,708	307.50
1980[1]	888		773	3,062	6,119	4,090	264.3	929	430	1,057	1,517	3,071	612.56
1981													

[1] Preliminary. [2] Excludes coinage. [3] Including space & defense. [4] U.S. Treasury price thru Mar. 15, 1968; thereafter Engelhard selling quotations. *Source: Bureau of Mines*

GOLD

U.S. Mine Production of Recoverable Gold In Thousands of Troy Ounces

Year	Alaska	Arizona	California	Colorado	Idaho	Montana	Nevada	New Mexico	South Dakota	Utah	Other States	Total U.S.
1969	21.2	110.9	7.9	25.8	3.4	24.2	456.3	9.0	593.1	433.4	47.0	1,733.2
1970	34.8	109.9	5.0	37.1	3.1	22.5	480.1	8.7	578.7	408.0	55.3	1,743.3
1971	13.0	94.0	3.0	42.0	3.6	15.6	374.9	10.7	513.4	369.0	55.9	1,495.1
1972	8.6	103.0	3.4	61.1	2.9	23.7	419.7	14.9	407.4	362.4	41.8	1,449.9
1973	7.1	102.8	3.6	63.4	2.7	27.8	260.4	13.9	357.6	307.1	29.2	1,175.8
1974	9.1	90.6	5.0	52.1	2.9	28.3	298.8	15.4	343.7	254.9	26.0	1,126.9
1975	15.0	85.8	9.6	55.5	2.5	17.3	332.8	15.0	304.9	189.6	24.2	1,052.3
1976	22.9	102.1	10.4	50.8	2.8	24.1	288.0	15.2	318.5	187.3	26.1	1,048.0
1977	19.0	90.2	5.7	72.7	12.9	22.3	324.0	13.6	304.8	210.5	24.0	1,100.3
1978	18.7	93.0	7.5	32.1	20.5	20.0	260.9	9.9	285.5	235.9	14.6	998.8
1979	6.7	101.8	3.2	13.9	24.1	24.1	250.1	23.0	245.9	260.9	16.3	969.9
1980[1]	2.9	75.6	5.2	38.9	25.4	21.9	236.6	14.1	267.3	181.2	19.0	888.0
1981												

[1] Preliminary. *Source: Bureau of Mines*

Commodity Exchange Inc. (COMEX) Warehouse Stocks of Gold In Thousands of Ounces

Year	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1975			301.6	428.7	328.1	442.3	465.8	527.0	562.6	590.6	559.2	517.1
1976	403.2	369.1	342.0	350.8	364.8	355.5	327.3	282.3	270.0	273.1	258.2	258.7
1977	291.8	364.2	359.0	379.9	409.3	454.1	466.7	522.4	601.8	601.2	946.4	1,788
1978	1,822	2,084	2,480	2,736	2,883	2,864	2,796	2,894	2,870	2,734	2,780	2,629
1979	2,604	2,566	2,540	2,501	2,286	2,443	2,700	2,480	2,509	2,512	2,281	2,277
1980	2,253	2,445	2,575	2,897	3,097	3,291	3,386	3,597	3,619	3,832	4,873	5,099
1981	4,814	4,570	4,192	3,897	3,513							
1982												

Source: Commodity Exchange, Inc.—N.Y.

U.S. Monetary Stock of Gold at End of Month In Billions of Dollars

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1971	10.73	10.73	10.73	10.73	10.33	10.33	10.33	10.33	10.13	10.13	10.13	10.13
1972	10.13	9.59	9.59	9.59	10.41	10.41	10.41	10.41	10.41	10.41	10.41	10.41
1973	10.410	10.410	10.410	10.410	10.410	10.410	10.410	10.410	10.410	11.567	11.567	11.567
1974	11.567	11.567	11.567	11.567	11.567	11.567	11.567	11.567	11.567	11.567	11.567	11.652
1975	11.635	11.621	11.620	11.620	11.620	11.620	11.618	11.599	11.599	11.599	11.599	11.599
1976	11.599	11.599	11.599	11.598	11.598	11.598	11.598	11.598	11.598	11.598	11.598	11.598
1977	11.658	11.650	11.636	11.636	11.629	11.620	11.595	11.595	11.595	11.595	11.595	11.719
1978	11.718	11.718	11.718	11.718	11.718	11.706	11.693	11.679	11.668	11.655	11.642	11.671
1979	11.592	11.544	11.479	11.418	11.354	11.323	11.290	11.259	11.228	11.194	11.112	11.112
1980	11.172	11.172	11.172	11.172	11.172	11.172	11.172	11.172	11.168	11.163	11.162	11.160
1981	11.159											
1982												

Source: Federal Reservc Board

Total Volume of Trading of Gold Futures at New York (COMEX) In Thousands of Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	230.6	170.9	267.7	176.6	176.6	162.5	202.6	411.4	374.4	460.6	550.6	557.9	3,742
1979	607.7	506.8	386.2	335.9	557.9	527.9	601.0	591.3	594.5	552.8	565.5	714.5	6,542
1980	829.3	378.3	560.0	316.1	391.2	652.7	747.2	460.5	839.5	863.5	938.4	1,024.7	8,001
1981	943.6	708.7	994.5	570.2									
1982													

Source: Commodity Exchange, Inc. of N.Y. (COMEX)

High, Low & Closing Prices of December Gold Futures on COMEX In Dollars per Ounce

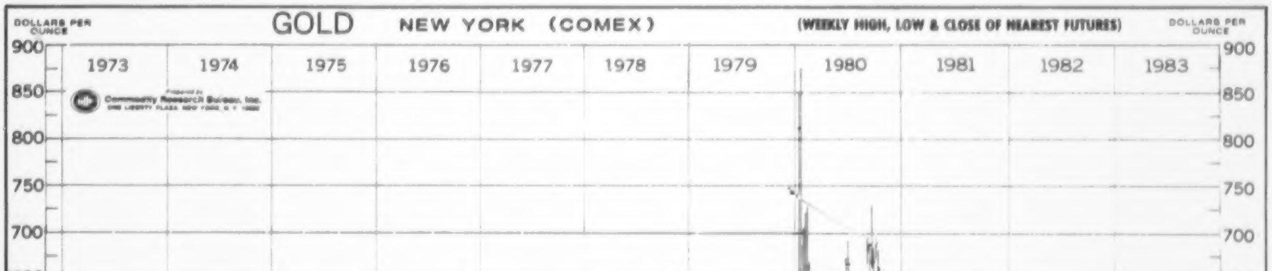
Year of Delivery		Yr. Prior to Deliv.			Delivery Year												Life of Delivery Range
		Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
1978	High	179.1	183.6	179.3	191.7	196.5	204.3	193.9	194.3	195.5	210.0	221.5	224.6	249.4	230.7	221.0	249.4
	Low	166.1	167.7	167.8	176.7	183.3	186.1	172.8	175.6	187.2	188.6	201.5	207.6	220.2	191.2	193.0	152.0
	Close	175.0	173.4	178.7	189.4	195.0	194.1	177.0	192.8	189.2	209.8	210.6	220.9	240.7	193.2	219.3	—
1979	High	274.6	257.0	250.8	263.0	278.0	271.6	264.1	291.6	297.6	319.5	330.0	409.0	444.5	421.0	510.0	510.0
	Low	242.0	213.1	214.0	237.2	248.5	251.5	244.0	258.9	284.4	292.4	288.0	330.5	373.0	365.0	424.0	187.6
	Close	267.0	214.9	249.8	253.2	271.6	256.6	262.4	290.7	293.5	297.3	326.7	404.5	385.7	419.1	506.3	—
1980	High	491.5	478.5	625.0	959.9	840.0	757.9	625.0	582.6	693.0	726.0	679.5	748.5	708.5	665.0	638.5	959.9
	Low	420.5	426.0	483.0	644.1	709.0	519.0	533.0	518.4	582.0	620.0	620.0	656.0	627.0	593.0	539.0	270.3
	Close	439.8	476.8	619.1	789.5	732.8	570.3	543.4	575.7	679.8	642.0	656.0	688.5	642.0	624.6	606.5	—
1981	High	814.0	779.0	753.0	690.0	585.5	605.7	585.5									
	Low	733.5	695.0	640.0	551.0	538.0	497.2	512.0									
	Close	750.2	738.7	680.1	563.4	536.5	562.1	529.5									

Source: Commodity Exchange, Inc. of N.Y. (COMEX)

Gold Total Open Interest at New York (COMEX) & Chicago IMM In Thousands of Contracts

Year	At New York (COMEX)												At Chicago (IMM)			
	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1	Jan. 1	Apr. 1	July 1	Oct. 1
1978	54.1	55.6	64.3	58.2	51.8	50.4	52.8	60.3	67.8	88.2	116.7	130.7	37.6	40.0	52.8	86.6
1979	183.2	165.4	173.2	160.5	165.2	160.7	143.6	177.9	176.1	171.3	176.2	197.9	99.9	68.7	74.5	61.7
1980	240.1	170.1	163.6	131.8	125.0	108.8	169.3	152.4	166.0	208.4	252.9	254.4	79.6	27.0	60.0	79.9
1981	295.5	211.4	202.5	180.8	187.9								88.6	54.8		

Source: Commodity Exch. Inc. of N.Y. (COMEX) & International Monetary Market of Chicago (IMM)



Grain Sorghums

The 1980 U.S. grain sorghum crop totaled 588 million bushels, down 27 percent from 1979 and the smallest since 1964. Acres harvested for grain totaled 12.7 million acres compared with 12.9 million in 1979/80. The 1980 yield of 46.2 bushels per acre was the lowest average yield since 1974. This was caused by the extremely hot, dry growing season throughout the major sorghum producing states.

The 1980/81 sorghum supply of 735 million bushels was 24 percent below 1979/80. 1980/81 domestic use was expected to decrease by 136 million bushels to 361 million bushels and exports to decline by 75 million bushels to 250 million, according to the USDA. Carryover stocks at the end of 1980/81 were estimated at 124 million bushels.

The 1981 target price was increased to $2.55 per bushel and the loan rates were increased 14 cents to $2.42 per bushel for sorghum entered into the Grain Reserve and the regular rate to $2.28 per bushel. No deficiency payment was required for the 1980 crop.

Salient Statistics of Grain Sorghums in the United States

Crop Year	Acreage Planted[2] for All Purposes	Acreage Harv.	Production 1,000 Bushels	Yield Per Harv. Acre Bushels	Price Cents Per Bushel	Produc. Value 1,000 Dollars	Acreage Harv. 1,000 Acres	Production 1,000 Tons	Yield Per Harv. Acre Tons	Acreage Harv. 1,000 Acres	Used on Farms where Produced	Sold	Mutual Security (AID)	Total
	——1,000 Acres——		——For Grain——				——For Silage——			——For Forage——	(In Mil. Bushels)		U.S. Exports Under Gov't. Programs (In Ths Metric Tons)	
1970–1	16,957	13,568	682,179	50.4	114	780,066	741	7,204	9.7	2,167	139.1	544.0	—	1,165
1971–2	20,756	16,142	867,997	53.8	105	904,748	1,011	10,998	10.9	2,675	244.5	623.5	—	1,387
1972–3	17,295	13,212	801,350	60.7	137	1,107,704	840	9,946	11.8	2,427	165.1	636.2	—	1,462
1973–4	19,231	15,700	923,224	58.8	214	1,995,150	836	9,520	11.4	2.093	180.8	742.4	115	960
1974–5	17,676	13,809	622,711	45.1	278	1,742,587	745	7,279	9.7	2,140	162.8	457.8	—	158
1975–6	18,104	15,403	754,354	49.0	237	1,775,023	763	7,492	9.9	1,438	176.8	576.2	148	210
1976–7	18,402	14,466	710,797	49.1	203	1,450,085	793	7,317	9.3	1,802	206.5	513.3	(610)	(657)
1977–8	16,993	13,797	780,944	56.6	182	1,433,991	839	9,184	10.9	1,556	250.3	542.6	1,306	1,834
1978–9	16,197	13,410	731,270	54.5	202	1,501,737	724	7,920	10.9	1,449	241.3	506.5	1,440	2,024
1979–0	15,277	12,901	808,862	62.7	231	1,866,925	764	9,015	11.8	1,211	247.7	566.6	1,370	2,034
1980–1[1]	15,894	12,722	587,997	46.2			744	7,107	9.6	1,424				
1981–2[1]	15,729													

[1] Preliminary. [2] Grain and sweet sorghums for all uses including sirup. *Source: Crop Reporting Board, U.S.D.A.*

Production of All Sorghums for Grain in the United States, by States In Thousands of Bushels

Year	Iowa	Arizona	California	Colorado	Kansas	Missouri	Nebraska	New Mexico	No. Carolina	Oklahoma	South Dakota	Texas	Arkansas
1970	1,771	11,410	21,460	10,000	145,960	12,826	75,480	15,456	2,756	23,310	8,398	329,616	
1971	8,700	9,417	21,016	9,600	233,550	47,700	123,420	20,474	6,240	23,400	12,250	303,004	
1972	2,460	8,346	17.424	10,030	217,000	26,980	118,080	19,305	4,400	20,855	13,536	319,780	
1973	1,606	7,992	20,090	9,100	218,400	30,800	136,000	19,602	4,292	26,400	11,266	417,000	
1974	736	8,580	15,120	7,685	132,800	23,750	62,700	11,000	4,320	19,080	5,616	312,000	6,720
1975	1,612	8,160	14,904	7,540	144,060	28,090	104,500	15,500	4,335	19,760	6,422	374,400	9,800
1976	1,690	6,643	14,910	7,252	169,850	39,600	119,700	11,940	4,590	16,950	3,496	292,900	15,500
1977	2,368	7,200	9,636	8,153	243,000	67,890	146,970	11,760	2,664	21,470	16,807	230,400	13,104
1978	1,800	1,950	9,585	10,540	196,860	66,300	140,250	12,282	4,042	17,460	17,750	227,850	12,000
1979	1,406	1,775	10,500	12,920	246,330	59,040	151,680	13,416	3,750	23,175	15,525	243,000	10,912
1980[1]	1,330	1,950	11,096	12,250	156,520	43,200	121,800	10,280	2,232	16,320	10,725	181,700	5,887

[1] Preliminary, December estimate. *Source: Crop Reporting Board, U.S.D.A.*

U.S. Grain Sorghum Quarterly Supply and Disappearance In Millions of Bushels

Year & Periods Beginning Oct. 1	Supply				Disappearance							Ending Stocks		
					Domestic Use									
	Begin. Stocks	Production	Imports	Total Supply	Food	Alc. Beverages	Seed	Feed	Total	Exports	Total	Gov't. Owned[1]	Privately Owned[2]	Total Stocks
1976–7	51.5	710.8	[4]	762.3	1.2	2.9	2.0	419.1	425.2	246.1	671.3	—	91.0	91.0
Oct.–Dec.	51.5	710.8	—	762.3	.3	.7	—	208.2	210.2	61.8	272.0	—	490.3	490.3
Jan.–Mar.	490.3	—	—	490.3	.4	.6	.2	110.4	111.6	83.1	194.7	—	295.6	295.6
Apr.–May	295.6	—	[4]	295.6	.2	.5	1.2	63.6	65.5	34.4	99.9	—	195.7	195.7
June–Sept.	195.7	—	—	195.7	.3	1.1	.6	35.9	37.9	66.8	104.7	—	91.0	91.0
1977–8	91.0	780.9	[4]	871.9	1.2	3.6	2.0	461.1	467.9	213.5	681.4	13.1	177.4	190.5
Oct.–Dec.	91.0	780.9	—	871.9	.3	.8	—	198.3	199.4	56.0	255.4	—	616.5	616.5
Jan.–Mar.	616.5	—	—	616.5	.1	.9	.2	134.3	135.5	68.0	203.5	.2	412.8	413.0
Apr.–May	413.0	—	—	413.0	.2	.6	1.2	56.1	58.1	35.8	93.9	.2	318.9	319.1
June–Sept.	319.1	—	[4]	319.1	.6	1.3	.6	72.4	74.9	53.7	128.6	13.1	177.4	190.5
1978–9	190.5	731.3	[4]	921.8	1.5	3.2	1.8	549.2	555.7	206.6	762.3	43.6	115.9	159.5
Oct.–Dec.	190.5	731.3	[4]	921.8	.3	1.1	—	236.8	238.2	46.6	284.8	36.6	600.4	637.0
Jan.–Mar.	637.0	—	—	637.0	.4	.4	.2	150.4	151.4	68.3	219.7	42.4	374.9	417.3
Apr.–May	417.3	—	—	417.3	.2	.4	1.0	65.4	67.1	28.0	95.1	42.8	279.4	322.2
June–Sept.	322.2	—	[4]	322.2	.6	1.3	.5	96.6	99.0	63.7	162.7	43.6	115.9	159.5
1979–0[3]	159.5	808.6	—	968.1	1.0	4.2	2.0	489.5	496.7	324.9	762.3	43.9	102.6	146.5
Oct.–Dec.	159.5	808.6	—	968.1	.3	1.3	—	244.6	246.2	74.2	320.4	45.3	602.4	647.7
Jan.–Mar.	647.7	—	—	647.7	.3	.9	.2	141.8	143.2	108.5	251.7	45.6	350.4	396.0
Apr.–May	396.0	—	—	396.0	.2	.3	1.2	56.1	57.8	60.3	118.1	45.6	252.3	277.9
June–Sept.	277.9	—	—	277.9	.2	1.7	.6	47.0	49.5	81.9	131.4	43.9	102.6	146.5
1980–1[3]	146.5	588.0	[4]	734.5	1.0	4.0	2.0	399.5	406.5	250.0	656.5			78.0
Oct.–Dec.	146.5	588.0	[4]	734.5	.3	1.3	—	200.8	202.4	66.3	268.7	43.7	422.1	465.8
Jan.–Mar.														

[1] Uncommitted inventory. [2] Includes quantity under loan & farmer-owned reserve. [3] Preliminary. [4] Less than 50,000 bushels. *Source: Commodity Economics Division, U.S.D.A.*

U.S. Exports of Grain Sorghums, by Country of Destination In Thousands of Metric[2] Tons

Yr. Beg. October	Poland	Belg. & Luxem.	Portugal	Spain	Germany, West	India	Venezuela	Israel	Japan	Senegal	Netherlands	Norway	Mexico	United Kingdom	Total All Exports
1969–0	0	6,444		0	11	104		21,177	83,908	0	5,702	0	1,078	0	125,444
1970–1	1,560	7,477		0	655	157		25,109	79,572	0	10,296	0	834	0	144,195
1971–2	—	390		—	1,284	298		19,863	68,069	1	5,155	—	6,629	2,475	122,932
1972–3	1,050	1,229		—	2,932	27,467		27,442	107,078	1,310	5,271	2,999	4,194	765	212,165
1973–4	1,000				2,100	12,100		23,100	117,700		22,300	3,800	10,600		234,100
1974–5	9,900	9,900		1,500	3,600	3,500		24,000	76,800		16,100	4,700	27,500	—	212,000
1975–6	22,700	18,900	6,300	3,000	3,100	19,600	16,300	25,600	88,000		13,500	4,400	1,600	700	229,000
1976–7	3,647	12,908	17,600	13,900	6	0	1,300	29,214	93,462		6,239	7,542	26,856	2,100	246,107
1977–8[2]	383.7	87.1			.2	—		633.9	2,439.8	60.6	6.7		468.0		5,422.9
1978–9[1]	136.4	—			.8	—		689.4	1,981.1	1.2	37.8		1,124.0		5,247.1

[1] Preliminary. [2] Data prior to 1977–8 are in THOUSANDS OF BUSHELS. *Source: Grain & Feed Division, U.S.D.A.*

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GRAIN SORGHUMS

Average Price of Sorghum Grain, No. 2, Yellow at Kansas City In Dollars Per 100 Pounds (Cwt.)

Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Average
1969–0	2.08	2.06	2.05	2.06	2.04	1.96	2.00	1.96	2.03	2.09	2.18	2.29	2.07
1970–1	2.22	2.12	2.27	2.37	2.35	2.32	2.41	2.46	2.58	2.53	2.25	1.91	2.32
1971–2	1.80	1.91	2.06	2.06	2.07	2.07	2.09	2.08	2.09	2.11	2.05	2.21	2.05
1972–3	2.17	2.42	2.88	3.06	2.88	2.86	2.83	3.09	3.61	3.93	4.72	4.37	3.24
1973–4	4.37	4.31	4.37	4.71	4.99	4.64	4.03	3.84	3.99	5.02	5.79	5.64	4.64
1974–5	6.32	6.10	5.36	4.95	4.55	4.48	4.64	4.60	4.53	4.82	5.13	4.66	5.01
1975–6	4.53	4.36	4.33	4.36	4.47	4.62	4.47	4.49	4.66	4.73	4.29	4.27	4.46
1976–7	3.88	3.60	3.77	3.91	3.85	3.75	3.62	3.53	3.28	3.15	2.73	2.78	3.49
1977–8	3.05	3.40	3.36	3.37	3.49	3.78	3.92	3.92	3.82	3.54	3.41	3.43	3.54
1978–9	3.61	3.67	3.64	3.71	3.73	3.77	3.81	3.92	4.41	4.89	4.44	4.34	4.00
1979–0[1]	4.42	4.41	4.57	4.21	4.35	4.20	4.15	4.31	4.49	5.36	5.71	5.61	4.65
1980–1[1]	5.65	5.91	5.82	5.79	5.52								

[1] Preliminary. *Source: Economic Research Service, U.S.D.A.*

Grain Sorghum Price Support Program & Market Prices

Year Beginning October	Price Support Operations (Million Bushels)										No. 2 Yellow ($ Cwt.)			
	Placed Under Price Support								$ Per Cwt.					
	Loans	Purchase Agreements	Total	Redeemed by Farmers	Delivered to CCC	Re-sealed	Total Deliveries to CCC	Owned by CCC October 1	Support Loan	Target Price	Kansas City	Fort Worth	Los Angeles	Gulf Ports
1970–1	30.5	—	30.5	25.0	—	5.5	2.0	35.1	1.61	—	2.42	2.73	2.99	2.73
1971–2	154.4	1	155		—			39	1.73	—	2.06	2.51	2.82	2.51
1972–3	29.8		40					5	1.79	—	3.81	3.75	4.16	3.75
1973–4	18.6							0	1.79	—	4.95	5.13	5.64	5.13
1974–5	3.9			4	0			0	1.88	—	5.04	5.62	6.12	5.47
1975–6	8.8			8	0			0	1.88	2.34	4.46	4.93	5.63	4.94
1976–7[1]	21			19	—			0	2.55	2.66	3.49	3.64	4.68	4.11
1977–8[1]	217			133	41			0	3.39	4.07	3.54	3.88	4.82	4.16
1978–9[1]	92			87	5			0	3.39	4.07	4.00	4.40	5.44	4.65
1979–0[2]	64			62	—				3.57	4.18	4.65	4.97		5.54
1980–1[2]	24			2	—				3.82	4.46	5.80	6.39		6.61

[1] Preliminary. [2] Estimate. *Source: Economic Research Service, U.S.D.A.*

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Hard Fibers

World production of sisal and henequen in 1980 was expected to increase about 4 percent to 397,500 tonnes (metric tons) from 380,000 in 1979. The increase in output was attributed to the improved outlook for sisal in Brazil, Tanzania, Haiti, and Mozambique that more than offset anticipated declines for sisal in Kenya and henequen in Mexico. Production in Angola was expected to total no more than 10,000 tonnes, as most of the estates remain closed.

Exports of raw sisal in 1980 from Brazil and Tanzania, the world's largest producers, were forecast at 142,000 tonnes, compared with 152,100 in 1979, while exports of processed products from these countries were expected to increase from 115,600 to 123,000 tonnes. The shift from fibers to manufactured products in the trade between producing and consuming countries was expected to continue in 1980, as new manufacturing equipment was being added in producing countries and old facilities in consuming countries were being phased out.

U.S. imports of sisal and henequen, at 4,920 tonnes in 1980, were down substantially from the 8,283 tonnes imported in 1979. Most of the raw fiber imported in recent years is used for padding and purposes other than making twine.

U.S. imports of twine made with sisal and henequen baler and binder in 1980 totaled 89,050 tonnes. This was a decline of 21.3 percent in volume. Imports of natural fiber twines have been declining in recent years, partly because of changes in hay harvesting methods and increased use of domestically produced synthetic twines. Demand for these imported natural fiber twines still largely depends on the size of the U.S. hay harvest.

Abaca production for 1980 also was expected to increase to 90,400 tonnes from 88,100 tonnes a year earlier. The Philippines accounts for virtually all of the world's commercial production, with 1980 production projected at 80,600 tonnes. Improved abaca market conditions have shifted growers back to abaca from corn, fruit, and vegetable crops. Ecuador is the world's second largest producer, with its 1980 production projected at 8,300 tonnes.

U.S. abaca imports in 1980 of 26,140 tonnes were up 6 percent by volume compared with those of 1979. The increase in the volume of imports largely reflected the continuing growth of abaca usage in the manufacture of specialty paper products, such as tea bags and filters. Shipments from the Philippines, the principal U.S. supplier, continued to increase while imports from Ecuador declined.

World Production of Hard Cordage Fibers In Thousands of Metric Tons[2]

	Abaca				Sisal								Henequen		
Year	Philippines	Ecuador	Others	World Total	Tanzania	Haiti	Brazil	Angola	Malagasy Rep.	Mozambique	Kenya	World Total	Mexico	Others	World Total
1969	161.8	*65–9*	*65–9*	167.8	461.4	50.7	438.0	124.2	*65–9*	66.2	109.8	1,391	298.0	*65–9*	328.0
1970	179.2	*Avg.*	*Avg.*	184.2	445.8	42.0	452.0	115.2	*Avg.*	63.9	96.8	1,347	307.5	*Avg.*	353.0
1971	149.0	*(1.0*	*(1.0*	155.6	399.0	28.7	463.0	143.3	*(14.0*	55.1	98.8	1,340	320.0	*(24.2*	335.5
1972	161.4	*M.T.)*	*M.T.)*	169.1	346.0	31.1	573.2	150.0	*M.T.)*	48.5	90.8	1,400	320.0	*M.T.)*	357.0
1973[2]	82.2	4.6	1.0	87.8	155.4	17.0	260.0	70.0	22.0	23.0	70.0	653.0	155.0	16.0	171.0
1974	87.0	9.5	2.0	98.5	135.4	19.0	225.0	70.0	22.6	18.8	86.0	615.1	148.7	14.6	163.3
1975	46.1	9.9	1.5	57.5	123.0	12.0	185.0	40.0	21.0	15.0	43.6	477.0	115.0	14.0	129.0
1976	72.5	13.2	1.5	87.2	119.0	5.0	165.0	25.0	18.6	19.0	33.6	422.5	116.0	14.0	130.0
1977	67.8	12.8	1.0	81.6	105.0	6.0	170.0	20.0	18.8	18.0	32.2	407.5	102.0	14.0	116.0
1978[1]	66.0	12.0	1.0	79.0	125.0	7.0	165.0	20.0	16.0	18.0	31.5	420.0	94.0	14.0	108.0
1979[3]	62.5	8.8	1.0	72.3	125.0	8.0	155.0	18.0	15.0	17.0	32.0	407.0	92.0	14.0	106.0

[1] Preliminary. [2] Data prior to 1973 are in MILLIONS OF POUNDS. [3] Estimate.
Source: Office of Foreign Agricultural Relations, U.S.D.A.

Imports[2] of Hard Fibers into the U.S., by Country of Origin In Thousands of Metric[3] Tons

	Abaca (or Manila)				Henequen			Sisal						Kapok	
Year	Philippines	Other	Ecuador	Total (All)	Mexico	Total (All)	Coir	Haiti	Brazil	Kenya	Tanzania, & Uganda	Mozambique	Total (All)	Total (All)	Thailand
1969	19.4	.1		21.4	20.8	20.8	2.4	8.6	15.0	—	7.1	.1	33.2	9.8	8.6
1970	19.0	—1.9—		21.2	26.8	26.8	2.8	7.0	13.8	—	9.7	—	31.8	11.5	10.6
1971	14.7	—1.4—		16.2	39.1	39.1	2.6	3.2	8.8	—	7.6	.3	21.8	12.2	11.2
1972	19.0	—2.0—		21.0	35.5	35.5	3.7	.4	6.8	—	4.5	.7	13.8	11.0	10.1
1973	17.7	—2.9—		20.5	17.5	17.5	5.6	3.3	7.5	—	2.1	—	14.3	13.6	13.3
1974	30.0	—6.2—		36.2	.6	.6	9.2	2.4	3.9	—	2.1	.1	9.6	10.1	9.8
1975	9.4	—9.1—		18.6			6.1	.6	5.4	—	.5	.6	8.8	6.3	6.2
1976	14.2	—8.0—		22.2	.3	.3	6.4	.2	7.1	—	4.0	1.6	14.5	7.5	7.5
1977[3]	14.3	—12.3—		26.7	.1	.1	8.6	—	9.1	1.3	1.0	.2	11.9	5.8	5.8
1978	13.9			22.1	.4	.4	9.7	.1	7.9	12.5	.7	0	21.5	6.3	6.2
1979	16.5	.1	8.1	24.7	.2	.2	10.5	.3	4.9	1.9	.3	.6	8.1	4.8	4.7
1980[1]	19.1	.5	6.6	26.1	.2	.2	11.2	1.4	1.5	1.1	.6	0	4.7	3.1	2.9

[1] Preliminary. [2] Imports for consumption. [3] Data prior to 1977 are in THOUSANDS OF LONG TONS.
Source: Dept. of Commerce

Hay

U.S. hay production during the 1980/81 crop year which began on May 1, 1980 was estimated by the USDA at 131 million tons, a decline of 11 percent from the 1979/80 crop. Acreage harvested decreased 3.7 percent from 1979 to 59.4 million acres in 1980. Average yield also decreased, from 2.40 tons per acre in 1979/80 to 2.21 tons per acre in 1980/81.

Alfalfa and alfalfa mixture hay production in 1980/81 was estimated at 79.9 million tons, a decrease of more than 9 percent from the previous season's total of 88.3 million tons. Acreage harvested declined 5 percent to 26.3 million acres, which was accompanied by a yield decrease of 4.7 percent to 3.04 tons per acre. Most of the acreage decline occurred in the Dakotas which were severely affected by drought.

Production of all other hay was estimated at 51.2 million tons, off 14 percent from the 1979/80 crop. Acreage decreased 2 percent to 33.2 million acres and yield decreased 12 percent to 1.54 tons per acre from the previous season.

Hot, dry weather throughout the spring and summer curtailed hay yields in the Midwest from Texas north through Minnesota and the Dakotas. Reduced yields were also experienced across the Southeast as a result of below normal rainfall and above average temperatures during the summer months. Favorable weather conditions produced hay yields higher than a year ago in most States west of the Rocky Mountains.

Hay disappearance during the 1980/81 marketing year was affected by the early start of hay feeding, which was caused by the summer drought. However, this was partly offset by a generally mild winter. Also, some corn and sorghum, originally planted for grain that was drought damaged, was salvaged as silage for roughage feed and helped to reduce hay disappearance. Consequently, May 1, 1981 stocks were estimated by the USDA at 25.5 million tons, a decrease of 23.5 percent from the record stocks of 33.3 million tons on May 1, 1980, but 4.5 million tons above early USDA projections.

Hay prices in December 1980 averaged a record high $74.20 per ton, about $15 per ton higher than the previous year but began to weaken seasonally during spring 1981 as feeding demand slackened with spring grazing. Normal weather during 1981 could produce a larger 1981/82 crop and somewhat lower prices.

Salient Statistics of All Hay in the United States

Year Beginning May	Acres Harvested 1,000 Acres	Yield Per Acre Tons	Production	Carry-over May 1	Disappearance	Farm Disposition		Supply	Disappearance	Animal Units Fed[2] Millions	Farm Price[3] $ Per Ton	Farm Produc. Value Million $	Price Received by Farmers		
			Million Tons			Kept on Farms	Sold	Per Animal Unit In Tons					Alfalfa Seed Dollars Per Cwt.	Timothy Seed	Red Clover Seed
1971-2	61,355	2.10	129.1	22.2	125.8	104.1	25.1	1.66	1.38	91.1	28.10	3,335	35.00	8.06	27.50
1972-3	59,680	2.15	128.6	25.5	129.8	102.8	25.8	1.65	1.39	93.2	31.30	3,729	43.60	15.60	40.80
1973-4	61,828	2.17	134.2	24.3	133.0	107.0	27.2	1.59	1.34	99.5	41.60	5,004	87.40	31.90	62.20
1974-5	60,195	2.10	126.4	25.4	133.3	100.9	25.5	1.46	1.28	103.8	50.90	5,791	83.20	21.20	58.30
1975-6	61,353	2.16	132.4	18.5	125.4	105.6	26.6	1.54	1.28	98.2	52.20	6,449	68.60	14.80	49.50
1976-7	60,377	1.99	120.1	25.5	126.1	94.4	25.6	1.54	1.33	94.8	60.30	6,811	102.00	27.50	63.20
1977-8	60,988	2.17	132.2	19.5	127.5	104.4	26.9	1.70	1.43	89.5	54.00	6,782	108.00	50.60	73.50
1978-9	62,113	2.32	143.8	24.2	137.9	114.4	27.8	1.95	1.60	86.0	49.80	6,573	117.00	43.50	68.00
1979-0[1]	61,666	2.40	147.8	30.0	142.5	117.2	28.7	2.01	1.63	87.5	59.20	7,325	114.00	34.30	62.30
1980-1[1]	59,437	2.21	131.1	33.3	139.1			1.79	1.56	89.0					
1981-2[2]															

[1] Preliminary. [2] Roughage-consuming animal units fed annually. [3] Price of hay sold baled, for year beginning July.
Source: Economic Research Service, U.S.D.A.

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U.S. Types of Hay Production & Farm Stocks In Millions of Short Tons

Year	Production: Alfalfa & Mixtures	Production: All Other	Production: All Hay	Production: Corn for Silage[1]	Production: Sorghum[1] Silage	Farm Stocks: Jan. 1	Farm Stocks: May 1
1971	77.2	52.0	129.1	109.3	11.0	87.7	22.2
1972	78.0	50.6	128.6	109.3	9.9	89.4	25.5
1973	79.1	55.6	134.2	114.3	9.5	88.8	24.3
1974	74.7	52.5	126.4	115.7	7.3	93.2	25.4
1975	78.0	54.2	132.4	115.7	7.4	84.7	18.5
1976	69.8	50.2	120.1	117.8	7.2	86.2	25.5
1977	80.4	50.9	132.2	116.7	9.2	77.4	19.5
1978	87.3	56.5	143.8	118.1	7.9	91.5	24.2
1979	88.3	59.5	147.8	114.9	9.0	98.1	30.0
1980[2]	79.9	51.2	131.1	111.1	7.1	106.8	33.3
1981							

[1] Not included in all tame hay. [2] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

Production of All Hay in the United States by Important States In Millions of Tons

Year	Calif.	Idaho	Ill.	Iowa	Mich.	Minn.	Mo.	No. Dak.	Nebr.	N.Y.	Ohio	Pa.	So. Dak.	Wis.	Texas
1971	7.9	3.8	3.2	6.7	2.7	8.2	5.4	4.9	6.9	5.4	3.2	4.4	5.7	11.1	4.1
1972	8.2	3.7	3.4	7.0	3.1	8.2	5.5	5.1	7.1	4.5	3.1	3.8	7.3	10.2	3.9
1973	7.9	4.1	3.3	7.3	3.4	8.0	5.9	4.2	7.5	5.2	3.3	4.3	5.6	10.6	5.8
1974	7.7	4.4	3.2	6.5	3.0	7.5	5.4	4.7	6.3	5.3	3.0	4.2	5.2	10.6	5.1
1975	7.6	4.4	3.5	6.9	3.3	8.0	5.6	5.3	6.5	5.1	3.6	4.3	5.7	10.6	5.2
1976	7.6	4.2	3.5	6.7	3.1	5.8	4.9	4.0	6.0	5.4	3.6	4.1	2.8	8.1	5.4
1977	7.7	4.5	3.7	7.4	2.9	8.1	5.7	3.2	7.5	4.6	3.6	3.9	6.3	12.0	4.7
1978	7.0	4.7	3.6	8.5	3.9	8.8	6.0	6.3	7.5	5.3	3.9	4.3	8.3	11.6	5.4
1979	7.3	4.1	3.8	8.7	3.8	8.9	6.2	5.7	7.6	5.5	3.6	4.3	7.6	12.6	7.1
1980[1]	7.7	4.4	3.6	8.0	3.8	7.1	4.5	2.5	7.1	5.8	3.6	4.2	5.4	12.5	5.5
1981															

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

Average Price Received by Farmers for All Hay (Baled) on the 15th of Month In Dollars Per Ton

Crop Year	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	Average[1]
1971–2	25.60	24.60	24.10	24.30	24.50	24.90	25.30	26.10	29.20	29.70	29.00	28.00	28.00
1972–3	31.30	30.90	28.50	29.30	29.80	30.30	31.00	33.00	34.60	35.40	35.40	33.90	31.30
1973–4	37.50	35.20	36.30	39.00	43.10	46.20	46.80	46.00	47.10	47.10	45.40	44.40	41.60
1974–5	54.00	47.70	48.20	51.10	51.90	51.50	50.30	50.70	50.10	49.30	49.70	52.40	50.90
1975–6	56.30	53.60	51.20	51.00	50.80	50.30	50.20	51.60	52.70	54.30	54.10	54.10	52.20
1976–7	64.10	59.60	59.00	58.70	60.80	60.10	59.00	59.00	60.90	62.70	63.90	63.20	60.30
1977–8	68.10	61.30	56.80	52.50	50.00	48.20	48.50	49.50	50.50	51.80	51.40	51.40	54.00
1978–9	55.30	51.20	49.20	49.00	47.80	47.10	46.40	47.30	48.90	50.70	50.20	49.90	49.80
1979–0	65.60	58.00	56.00	57.50	58.00	60.80	58.50	59.70	59.10	60.00	57.40	60.10	59.20
1980–1	70.60	64.60	66.50	68.20	70.50	74.60	73.60	74.20	73.80	74.00	71.60	72.70	
1980–1													

[1] Weighted average by sales. *Source: Crop Reporting Board, U.S.D.A.*

Heating Oil

(see feature study on page 26)

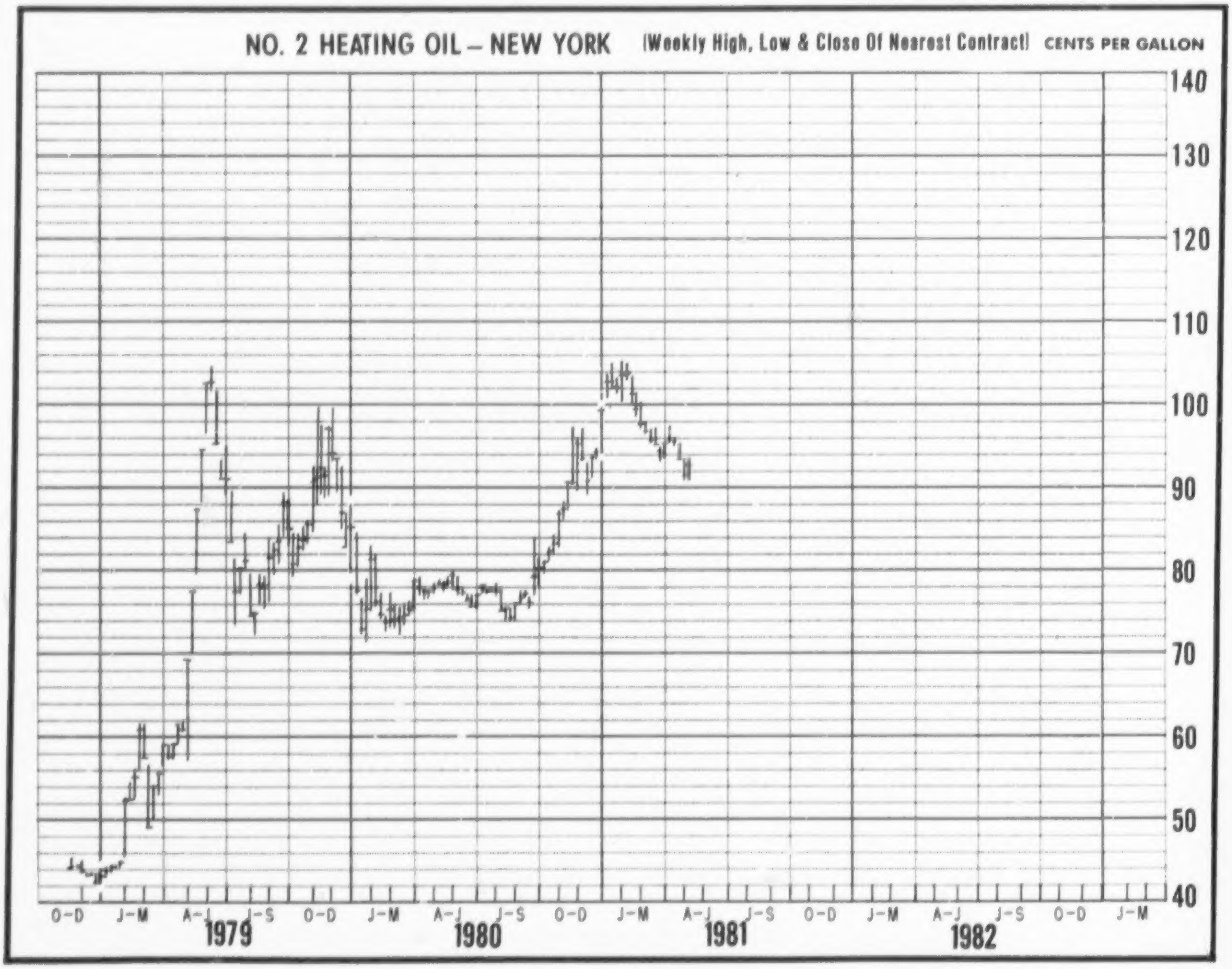
U.S. distillate fuel oil refinery production in 1980 averaged 2,683 thousand barrels per day, a 15 percent decline from the 3,152 thousand barrels per day average in 1979. Imports of distillate fuel oil averaged 139 thousand barrels per day in 1980, a 28 percent decline from the 1979 average of 193 thousand. Heating oil is produced from distillate fuel oils. No. 1, No. 2, and diesel oil are distillate fuel oils, a crude oil product which accounts for approximately 22 percent of the world-wide average yield per barrel of crude (per U.S. Bureau of Mines, based on 1976 production exclusive of the Soviet bloc and China).

In 1980, refiners' average selling price of heating oil to resellers and retailers was 80.0 cents per gallon, up 43 percent from 1979. The average 1980 price of heating oil paid by distributors was 82.2 cents per gallon, up 55 percent from 1979. The average selling price to residential customers in 1980 was 97.7 cents per gallon, up 33 percent from 1979.

The increases in heating oil costs in 1980 were a large factor causing decreased consumption compared with 1979. Between the end of December, 1978 and the end of February, 1979 (the key winter period of heating oil use), U.S. stocks declined by 3,190 thousand barrels total, while production (product supplied) averaged 1,096 barrels per day in January, 1979 and 1,149 in February 1979. In 1980, production (product supplied) increased to 1,101 barrels per day average in January, and decreased to 1,072 barrels per day average in February. Between the end of December 1979 and the end of February 1980, total stocks declined by only 262 thousand barrels. This was part of a larger trend in decreased consumption. The total consumption of energy from petroleum (heating oil plus all other petroleum products) used by the residential and commercial (nonindustrial) sector (the primary user of heating oil) declined to 4,389 quadrillion BTU in 1980, from 5,027 quadrillion BTU in 1979.

Futures Markets

Heating oil futures are traded on the New York Mercantile Exchange (NYMEX). Trading in Gasoil futures was initiated April 6, 1981 on the International Petroleum Exchange (IPE) in London.



NO. 2 HEATING OIL – NEW YORK (Weekly High, Low & Close Of Nearest Contract) CENTS PER GALLON

Month End Open Interest of Heating Oil[1] Futures in New York In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	FUTURES TRADING BEGAN NOV. 14, 1978										12	55
1979	327	200	118	299	370	485	1,165	1,280	1,894	1,952	2,221	1,973
1980	2,186	2,590	2,032	2,324	2,622	2,948	3,286	5,889	8,365	11,884	13,519	11,556
1981	11,792	12,040	13,256	14,892								

[1] No. 2 heating oil. *Source: N.Y. Mercantile Exchange*

Volume of Trading of Heating Oil Futures[1] in New York In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	FUTURES TRADING BEGAN NOV. 14, 1978										37	79	116
1979	365	515	182	369	502	1,377	2,156	2,205	2,847	5,895	9,371	8,010	33,804
1980	8,512	8,427	5,146	4,798	3,421	5,923	6,074	11,564	27,430	40,525	53,098	63,366	238,284
1981	67,368	58,514	55,299	61,826									

[1] No. 2 heating oil. *Source: N.Y. Mercantile Exchange*

High, Low & Closing Prices of January Heating Oil Futures[1] in N.Y. In Cents per Gallon

Year of Delivery		Year Prior to Delivery[2]												Life of Delivery Range
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.[2]	
1980	High	—	—	69.50	70.20	102.50	106.50	91.00	88.00	94.00	95.30	102.75	99.75	106.50
	Low	—	—	59.25	69.50	90.00	91.50	74.75	78.00	83.20	83.00	92.75	82.75	59.25
	Close	—	—	69.50	70.00	102.50	92.25	80.50	85.50	89.00	95.30	97.00	82.75	—
1981	High	—	—	—	94.00	93.25	91.00	86.50	82.00	87.50	90.25	99.00	97.25	99.00
	Low	—	—	—	88.00	90.25	85.90	81.50	78.45	79.00	83.15	88.50	89.25	78.45
	Close	—	—	—	92.50	91.00	86.60	81.55	81.12	84.55	89.50	95.62	96.90	—
1982	High	—	114.00	113.10	110.70									
	Low	—	113.75	109.50	101.00									
	Close	—	114.50	109.50	102.00									

[1] No. 2 heating oil. [2] Contract expires the last business day of the previous calendar month quoted. *Source: N.Y. Mercantile Exchange*

U.S. Gross Input to Crude Oil Distillation Units In Millions of Barrels of 42 Gallons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1968	312.9	297.0	312.8	299.5	324.1	310.2	328.1	328.5	312.4	319.5	304.8	324.7	3,774
1969	303.8	299.3	325.7	312.1	326.2	324.4	339.1	334.8	324.3	325.7	321.6	342.7	3,880
1970	336.9	304.8	335.9	318.4	324.0	326.2	335.5	341.7	330.3	336.6	330.6	346.7	3,968
1971	344.9	312.3	345.1	336.2	332.8	344.5	355.0	352.4	334.0	345.5	333.6	351.5	4,088
1972	353.0	329.3	351.7	335.5	355.8	355.2	368.4	369.4	363.4	368.0	355.5	375.5	4,281
1973	377.9	341.2	378.2	366.2	380.7	385.9	395.2	391.7	376.8	395.5	371.2	376.6	4,537
1974	373.2	326.5	368.7	371.6	400.4	398.8	414.1	409.1	380.0	398.3	386.0	404.9	4,632
1975	395.8	353.9	384.3	368.3	384.7	385.6	414.9	416.9	401.5	397.3	394.6	411.4	4,709
1976	403.6	388.1	412.2	396.4	413.4	427.7	446.1	446.3	425.3	428.0	437.3	457.0	5,081
1977	453.6	425.6	456.3	438.5	462.8	458.0	471.2	466.0	457.5	465.9	449.6	463.5	5,468
1978	449.8	401.2	447.9	426.3	472.2	451.2	470.3	483.2	461.9	475.9	470.6	487.6	5,501
1979	467.4	409.1	449.1	445.0	457.0	453.5	477.9	474.0	447.2	458.0	446.8	471.8	5,457
1980	453.5	421.8	434.0	412.9	423.4	421.7	421.9	412.3	407.9				
1981													

Source: Bureau of Mines

HEATING OIL

Average Price of Distillate (Middle) No. 2 Fuel Oil[1] Index (1967 = 100)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1973	113.9	124.1	129.1	130.1	133.8	137.4	141.8	143.3	145.6	147.7	157.3	171.7	139.7
1974	194.8	234.1	251.8	257.9	269.2	279.7	288.9	294.8	298.8	297.9	296.0	300.1	272.0
1975	299.1	297.5	294.6	294.9	296.1	301.3	308.3	312.9	318.2	322.9	330.8	336.3	309.4
1976	336.7	339.3	335.3	331.8	328.5	329.2	332.2	336.2	338.9	341.2	344.3	349.8	337.0
1977	359.0	369.4	377.8	384.0	387.0	386.8	388.7	388.8	388.9	389.1	392.2	394.2	384.1
1978	396.6	398.6	394.8	393.3	393.3	393.2	393.1	393.4	394.1	399.9	407.6	418.0	398.0
1979	425.7	432.6	451.9	477.9	504.8	542.3	593.1	632.8	680.6	709.9	715.3	719.9	573.9
1980	739.3	793.5	837.7	858.9	964.8	860.9	870.2	875.6	873.2	868.4	873.4	891.2	850.6
1981	935.2	998.5											

[1] Barge lots, f.o.b. refinery or terminal, excluding all fees & taxes. *Source: Bureau of Labor Statistics*

Average Wholesale Price of Kerosene (Light Distillate)—No. 1 Fuel Index (1967 = 100)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1973	112.1	120.4	121.2	123.4	122.9	126.9	128.6	129.4	130.0	135.6	135.9	145.9	128.0
1974	154.3	184.8	198.7	209.4	217.6	233.2	241.7	250.2	256.8	254.7	261.4	257.9	226.7
1975	253.7	267.2	274.9	273.6	280.6	284.6	283.7	299.1	297.9	299.4	304.2	307.8	285.6
1976	310.5	316.6	313.9	311.2	306.7	303.8	305.4	309.2	311.5	316.0	320.2	323.2	312.3
1977	325.6	339.2	346.6	351.7	355.0	357.2	360.5	362.8	363.5	374.9	379.3	381.2	358.5
1978	383.0	388.2	388.4	387.9	390.6	391.1	392.8	393.9	395.5	397.1	398.4	403.0	392.7
1979	407.5	412.7	419.1	433.0	465.5	504.1	533.4	588.4	632.9	675.2	696.6	706.3	539.6
1980	733.9	776.9	834.6	862.5	870.5	878.4	892.7	903.1	901.8	895.2	895.7	910.3	863.0
1981	931.1	971.0											

Source: Bureau of Labor Statistics

Stocks of Distillate Fuel in the U.S., First of the Month In Millions of Barrels

													Residual Fuel —Oil Stocks—	
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan. 1	July 1
1968	159.7	119.8	96.9	93.5	101.2	115.8	139.5	168.1	191.4	206.0	211.8	204.0	65.6	67.6
1969	173.2	130.6	106.6	99.6	99.8	110.9	132.6	159.1	183.5	197.7	208.0	201.0	65.4	60.5
1970	171.7	130.7	111.5	101.0	102.1	115.8	137.5	163.5	188.2	205.7	216.4	218.1	58.4	46.0
1971	195.3	158.7	128.7	112.9	113.7	125.8	145.8	172.4	197.0	210.1	223.0	214.8	54.0	58.7
1972	190.6	160.1	122.2	101.8	98.3	112.9	128.8	155.6	174.7	190.3	195.6	182.6	59.7	56.1
1973	154.3	131.0	113.3	111.3	114.7	119.1	137.9	160.9	177.3	190.2	203.0	200.2	55.2	51.8
1974	196.5	181.2	149.2	128.9	125.6	141.8	160.7	182.5	198.7	208.3	209.9	212.9	53.5	57.9
1975	200.1	199.8	176.7	161.1	146.3	152.1	163.3	181.5	197.4	220.8	226.2	235.8	59.7	69.7
1976	208.8	165.5	150.5	138.3	137.3	147.1	165.1	190.9	218.0	232.3	235.6	223.7	74.1	64.3
1977[1]	186.0	143.0	133.3	141.9	148.3	162.2	178.9	204.9	229.8	252.8	267.4	270.6	72.3	71.9
1978[1]	250.3	213.4	165.9	137.9	136.3	145.1	157.5	180.5	200.4	220.8	233.1	233.2	90.0	71.9
1979[1]	216.5	175.7	127.1	112.7	115.0	123.1	141.4	171.3	195.4	220.3	231.1	236.6	90.2	80.9
1980[1]	228.7	212.1	191.5	177.7	177.0	183.1	195.8	213.8	226.3	232.3			95.9	87.7
1981														

[1] Preliminary. *Source: Bureau of Mines*

U.S. Production of Distillate Fuel Oil In Millions of Barrels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	94.7	82.2	93.0	88.2	99.4	93.2	96.4	101.6	95.2	101.9	100.6	103.5	1,156.1
1979	93.2	80.2	92.8	88.1	95.0	94.1	102.5	103.3	101.0	100.7	97.7	99.9	1,150.8
1980	93.7	80.6	79.5	73.9	76.6	79.4	83.4	76.3	80.6				
1981													

Source: Dept. of Energy

U.S. Imports of Distillate Fuel Oil In Millions of Barrels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	6.0	5.8	5.8	3.0	3.7	4.4	4.6	4.4	4.9	5.5	6.7	7.9	63.3
1979	7.0	5.5	5.5	4.5	5.8	5.4	6.8	6.7	3.8	6.6	7.0	7.1	71.8
1980	5.5	6.4	5.5	4.4	3.9	3.2	3.6	2.4	3.0				
1981													

Source: Dept. of Energy

U.S. Domestic Consumption of Distillate Fuel Oil In Millions of Barrels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	137.6	135.3	126.8	92.8	94.4	85.1	77.9	86.2	79.6	95.1	107.0	128.2	1,252.6
1979	140.8	134.2	112.4	90.2	92.7	81.2	79.1	85.9	79.8	96.2	99.3	114.9	1,209.7
1980	115.7	107.5	98.3	78.9	74.4	69.9	69.0	66.2	77.7				
1981													

Source: Dept. of Energy

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Hides and Leather

U.S. production of cattlehides derived from total commercial slaughter increased less than 1 percent from the 1979 level, to 33.8 million, and a modest increase in production was also expected for 1981.

The supply of cattlehides available for domestic tanning expanded in 1980, primarily because hide exports declined from the 1979 level of 23.7 million hides to an estimated 19.9 million. Hide exports in 1980 represented about 61 percent of total commercial slaughter, whereas exports in 1979 represented a record high 71 percent of slaughter. The percentage of cattlehides exported annually had risen steadily from 41.9 percent in 1969 to the high of 71 percent in 1979. In 1980, Japan, the Republic of Korea, Mexico, Taiwan, and Italy were the major importers of U.S. cattlehides, with Japan and Korea together accounting for about 51 percent of the total.

Despite the 1980 reduction in U.S. cattlehide exports, the high percentage of U.S. cattlehides exported continued to be a major problem for domestic tanners and leather products manufacturers. Many developing countries restrict exports of indigenous cattlehides in order to foster the growth of their own tanning and leather products industries. This policy tends to divert world import demand for hides to freely traded U.S. cattlehides. In addition to restrictive policies of some developing countries, Japan's restrictions and tariffs on imported leathers enabled that country to import large amounts of U.S.-produced raw cattlehides, thereby disrupting U.S. raw material markets by forcing up the price of hides and consequently the production cost of domestic leather and leather products. This situation was alleviated to some extent by a 3-year agreement effective April 1, 1979 establishing an annual quota for U.S. leather exports to Japan of approximately 22.5 million square feet of leather.

In 1979, Argentina was scheduled to replace its cattlehide export embargo with a 20 percent export tax which was to be phased out by October 1981, but it failed to effect the first scheduled reduction of the tax to 15 percent in April 1980. In September 1980, the U.S. reached a separate 1-year agreement with Brazil, which provides that the Brazilian export embargo on raw cattlehides will be replaced by an 18 percent export tax. Uruguay was also expected to grant supply access on terms similar to those in the Argentine agreement.

The leather tanning and finishing industry comprises establishments primarily engaged in tanning, currying, and finishing raw or cured hides and skins into leather. The long term decline in unit shipments by the U.S. tanning industry, starting from a peak of 33.1 million in 1965, appeared to have been halted temporarily in 1980 and was expected to increase about 2 percent in 1981 to around 18.5 million equivalent units of cattlehides. The quantity of leather shipments by U.S. tanners in 1980 remained unchanged from the 1979 level at an estimated 18.1 million equivalent cattlehide units. Included in this total are leathers produced from hides or skins of cattle, calves, kips, goats, sheep, lambs, cabrettas, and horses. (Cattlehide leathers represented 15.1 million units, or 83 percent of this total.) U.S. exports of leather increased in 1980, paced by a sharp gain in wet-blue chrome leather exports. Tanned, but only semi-processed, wet-blue chrome leather has become a major item in international leather trade. Because of its lower freight costs and predictable grades and quality, wet-blue cattlehide leather is considered to have a distinct advantage over raw cattlehides.

U.S. production of nonrubber footwear continued to decline in 1980, dropping to an estimated 389 million pairs, down 2.4 percent from 398.5 million in 1979. Total domestic nonrubber footwear product shipments in 1980 were about 4 percent below the 1979 level. In 1980, men's footwear accounted for 22 percent of the quantity of total product shipments of the domestic nonrubber footwear industry. By quantity, about 82 percent of men's footwear is produced of leather, whereas about 52 percent of the content of women's shoes is leather.

World Production of Bovine Hides and Skins In Thousands of Units of Metric Tons

Year	Argentina	Australia	Brazil	Canada	Colombia	France	Germany		Mexico	Italy	Poland	South Africa	Turkey	Un. Kingdom	United States	U.S.S.R.
							East	West								
1970–74	246.7	129.3	331.4	89.7	64.9	143.6	44.0	145.8	80.0	102.5	56.5	67.7	46.0	94.7	1,012	675.2
1975	277.4	185.5	338.0	111.7	67.2	163.3	47.3	155.5	107.7	91.4	76.1	66.9	57.0	127.4	1,199	695.3
1976	320.1	208.0	339.0	117.6	76.5	174.0	48.2	167.1	108.0	93.6	86.1	55.3	50.1	111.6	1,223	725.6
1977	339.2	219.5	375.0	115.3	73.0	162.2	49.1	161.1	114.6	95.5	80.4	58.8	52.1	102.9	1,209	735.0
1978[1]	370.8	202.1	336.0	106.1	78.2	162.8	49.7	164.5	124.0	91.9	75.9	65.1	53.4	99.0	1,134	741.0
1979[1]	355.2	174.0	330.0	94.6	81.3	163.0	50.2	170.4	122.0	91.9	77.2	69.2	53.4	95.0	964.1	760.0
1980																

[1] **Preliminary.** *Source: Foreign Agricultural Service, U.S.D.A.*

U.S. Imports and Exports of All Cattle Hides In Thousands of Hides

Year	Imports		U.S. Exports—By Country of Destination												
	Total	From Canada	Total	Canada	France	W. Germany	Japan	Mexico	Netherlands	Poland	Spain	Romania	South Korea	Czech.	Italy
1970	385	323	15,222	761	287	714	6,206	2,046	332	152	260	449	271	499	335
1971	275	245	15,962	883	545	576	6,010	2,195	305	473	842	571	357	694	62
1972	292	283	17,578	893	753	585	7,246	1,776	299	545	758	1,201	411	852	178
1973	694	661	16,866	764	548	535	6,840	2,005	129	719	503	1,006	821	807	426
1974	520	484	18,428	790	327	396	6,642	2,500	153	639	554	1,777	1,252	638	250
1975	958	954	21,269	805	504	315	7,108	2,362	219	787	948	1,226	2,203	877	565
1976	962	958	25,270	1,057	816	518	9,356	1,708	326	389	957	1,651	3,270	678	1,561
1977	932	926	24,489	859	769	435	8,425	1,967	417	433	940	1,472	3,611	680	1,048
1978	704	694	24,791	1,093	555	379	8,797	1,938	211	349	1,019	1,942	3,720	586	1,284
1979	673	643	23,731	1,248	691	454	7,396	2,428	324	513	892	1,317	2,526	682	2,248
1980[1]	880		19,512	1,046	238	206	7,476	1,972	164	522	112	1,046	2,653	318	690

[1] Preliminary. *Source: Tanners' Council of America*

Salient Statistics of Hides & Leather in the United States

Year	New Supply of Cattle Hides					Wholesale Prices—F.O.B. Pts.		Leather Production[4]	Leather Exports		Wholesale Leather Prices		Footwear	
	Domestic Slaughter													
	Federally inspected	Uninspected[8]	Total Production	Net Exports	Total New Supply	Calf[2] Skins	Hides[3]; Steers, Heavy	Thous. Equiv. Hides	Glove & Garment	Upper & Lining	Sole[5]	Upper[6]	Production[7]	Export
	Thousands of Equivalent Hides					¢ per lb.			Thous. Sq. Ft.		1967 = 100		Mil. Pairs	
1971	31,419	4,861	36,280	15,694	20,586	29.4	14.5	20,520	——82,944——		114.4	81.8	536	2.1
1972	32,267	4,213	36,480	17,705	18,775	56.3	29.6	20,084	——117,556——		157.5	106.7	527	2.3
1973	30,521	4,179	34,700	16,177	22,728	62.2	34.3	17,768	——120,104——		184.6	119.5	490	3.6
1974	33,319	4,381	37,700	17,924	19,776	64.4	23.1	16,829	——148,565——		158.8	N.A.	453	4.0
1975	36,904	4,896	41,800	20,329	21,471	35.0	23.4	N.A.	——184,104——		151.1	N.A.	413	4.3
1976	38,992	4,590	43,582	24,318	19,264	75.5	33.8	N.A.	——203,707——		197.9	N.A.	423	6.0
1977	38,717	3,139	41,856	23,569	18,287	91.4	37.0	N.A.	——206,276——		206.1	N.A.	414	5.4
1978	36,948	2,604	39,552	24,101	15,451	134.6	47.2	N.A.	——208,799——		235.2	N.A.	419	6.2
1979	31,504	2,173	33,678	23,063	10,615	168.7	73.1	N.A.	——187,665——		329.6	N.A.	398	7.6
1980[1]	31,642	2,162	33,804	18,641	15,163	109.8	45.9	N.A.	——161,330——		281.4	N.A.	395	9.8

[1] Preliminary. [2] Packer, heavy, 9½ to 15 pounds. [3] Native, over 53 pounds. [4] Cattle hides & side kip. [5] Bends, light, f.o.b. tannery. [6] Chrome calf, B&C grades, f.o.b. tannery. [7] Other than rubber. [8] Includes farm slaughter; diseased & condemned animals & hides taken off fallen animals. *Sources: Tanners' Council of America; Bureau of Labor Statistics; Dept. of Commerce*

U.S. Imports of Sheep and Lamb Skins In Thousands of Pieces

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1973	910	1,437	1,883	1,547	1,219	804	1,598	1,157	540	684	562	494	12,835
1974	765	791	1,468	1,308	1,839	2,375	1,232	1,728	1,449	1,077	1,167	533	15,732
1975	1,161	1,515	1,615	1,603	1,162	1,024	1,668	1,096	1,372	1,311	1,145	849	15,520
1976	929	959	2,793	2,216	1,289	2,366	1,494	1,336	1,414	817	523	467	16,603
1977[1]	815	1,166	1,942	1,355	2,260	1,724	1,601	1,385	1,295	482	155	1,288	15,468
1978[1]	841	1,850	2,080	2,541	2,245	1,577	1,849	1,323	1,093	920	935	739	17,807
1979[1]	1,321	1,581	1,835	1,449	2,967	1,425	1,080	1,331	804	514	598	624	15,529
1980[1]	779	641	1,074	1,378	1,466	1,027	640	666	286	492	330	248	9,027
1981[1]	546												

[1] Preliminary. *Source: U.S. Department of Commerce*

U.S. Exports of Upper & Lining Leather In Thousands of Square Feet

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1973	8,746	7,872	9,254	11,311	12,618	10,873	8,154	10,353	9,919	10,184	6,459	9,563	120,104
1974	9,984	10,163	10,407	11,917	16,191	14,674	12,800	11,699	14,108	12,831	11,032	12,759	148,565
1975	14,748	12,427	13,574	14,624	16,735	18,473	13,341	16,979	14,714	17,131	16,737	12,909	184,104
1976	14,517	17,367	18,157	19,449	21,149	18,795	14,028	12,074	18,343	14,361	15,108	18,388	203,707
1977[1]	18,630	19,272	23,315	18,338	16,714	16,205	18,612	12,276	16,838	12,807	14,980	18,240	206,227
1978[1]	17,364	15,309	16,408	16,720	18,899	21,427	14,160	19,726	16,224	17,438	17,947	17,176	208,799
1979[1]	13,854	16,014	18,833	16,480	15,664	18,526	13,153	15,265	14,456	13,895	16,089	15,433	187,665
1980[1]	16,769	16,873	18,710	13,024	12,652	15,483	15,481	15,215	15,818	19,051	20,880	13,641	192,597
1981[1]	19,633												

[1] Preliminary. *Source: Tanners' Council of America*

HIDES AND LEATHER

U.S. Exports of Calf and Kip Skins In Thousands of Skins

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1974	144	169	337	184	231	189	114	101	126	136	140	292	2,163
1975	280	161	236	174	230	115	166	159	193	284	197	209	2,403
1976	195	151	247	262	212	122	161	159	133	217	145	158	2,162
1977[1]	194	182	144	250	174	171	246	187	249	179	196	336	2,508
1978[1]	211	160	288	265	194	199	222	189	339	181	177	241	2,665
1979[1]	207	264	233	267	126	204	216	196	169	140	143	157	2,321
1980[1]	159	205	337	181	147	122	260	281	325	138	137	202	2,494
1981[1]	242												

[1] Preliminary. *Source: U.S. Department of Commerce*

Exports of Cattle Hides from the United States In Thousands of Hides

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1971	1,207	1,251	1,611	1,239	1,304	1,235	694	1,166	1,338	1,565	1,696	1,656	15,962
1972	1,272	1,153	1,686	1,210	1,437	1,317	2,152	1,324	1,290	1,893	1,733	1,524	17,589
1973	1,461	1,837	1,802	1,340	1,411	1,266	1,155	1,100	1,229	1,463	1,412	1,391	16,867
1974	1,423	1,500	1,462	1,567	1,554	1,123	1,615	1,529	1,423	1,619	1,708	1,905	18,428
1975	1,663	1,810	1,989	2,045	1,834	1,719	1,551	1,548	1,714	1,678	1,965	1,753	21,269
1976	2,172	1,658	2,407	2,386	2,075	2,030	2,002	2,073	2,016	2,040	2,042	2,282	25,270
1977	2,276	1,998	2,289	2,167	2,016	2,023	2,189	1,937	2,157	1,631	1,572	2,235	24,488
1978	1,893	2,021	2,270	2,375	2,122	2,078	1,725	2,176	1,779	1,922	1,754	2,676	24,792
1979	1,635	2,056	2,405	2,130	2,358	2,034	1,627	2,018	1,993	1,830	2,041	1,603	23,731
1980	1,308	1,705	1,737	1,671	1,914	1,650	1,509	1,703	1,510	1,608	1,542	1,711	19,568
1981	1,536												

Source: U.S. Department of Commerce

U.S. Production of Footwear (Shoes, Sandals, Slippers, Athletic, Etc.) In Millions of Pairs

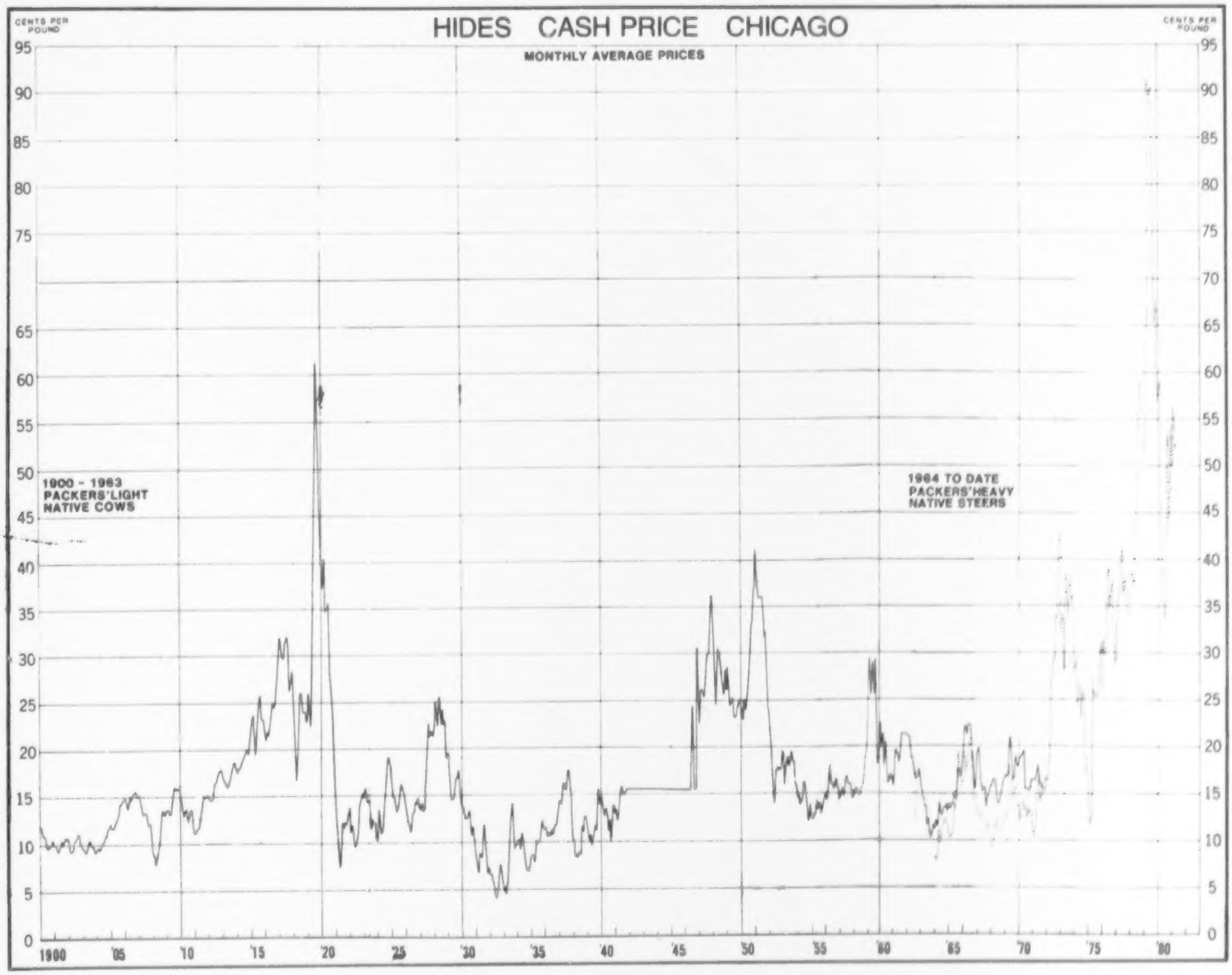
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1970	47.6	47.5	50.2	48.6	46.3	47.9	42.9	47.3	47.7	49.0	40.9	43.4	562.3
1971	44.8	44.9	50.3	46.8	44.1	46.7	37.6	46.3	45.7	45.1	40.7	42.9	535.8
1972	44.5	44.3	48.7	44.1	45.2	46.2	36.1	46.2	44.2	46.4	41.1	38.5	526.5
1973	42.9	41.9	46.8	41.9	41.7	41.7	32.1	43.7	39.2	45.2	38.5	34.2	490.0
1974	40.8	41.1	42.9	39.9	43.2	39.9	32.9	37.3	34.8	36.9	33.2	30.2	453.0
1975[1]	32.7	31.2	31.6	32.8	32.7	34.1	32.2	36.2	37.7	42.4	34.6	35.0	413.1
1976[1]	37.0	36.1	42.2	39.4	38.7	37.3	29.5	34.8	35.1	33.2	30.0	29.2	422.5
1977[1]	30.9	31.3	34.6	31.3	32.8	33.2	24.9	34.6	32.9	33.7	33.2	31.2	413.7
1978[1]	32.4	32.6	37.3	36.2	36.8	34.2	24.5	34.4	31.6	33.5	33.8	30.2	418.9
1979[1]	35.7	33.4	37.0	31.9	35.4	30.5	24.4	33.8	31.0	34.9	31.3	28.7	398.5
1980[1]	35.5	33.7	34.4	33.5	34.8	33.1	27.9	31.5	33.3	37.0	30.3	29.4	394.6
1981													

[1] Preliminary. *Source: U.S. Department of Commerce*

Avg. Prices of Calfskins, Packer, Heavy, 9½–15 Lb., F.O.B. Shipping Point In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1969	65.0	55.0	65.0	65.0	65.0	60.0	57.5	57.5	50.0	45.0	45.0	43.0	56.1
1970	40.3	30.0	30.0	37.5	37.5	27.5	32.0	35.0	32.0	32.0	32.0	31.5	33.1
1971	30.0	30.0	27.5	30.0	30.0	30.0	30.0	30.0	28.0	28.0	28.0	32.0	29.4
1972	33.0	45.0	45.0	57.5	57.5	56.0	56.0	65.0	65.0	65.0	65.0	66.0	56.3
1973	66.0	66.0	66.0	61.0	61.0	61.0	61.0	61.0	61.0	61.0	61.0	61.0	62.2
1974	61.0	—	61.0	61.0	85.0	85.0	85.0	75.0	60.0	55.0	45.0	35.0	64.4
1975	30.0	28.5	28.5	28.5	50.0	—	35.0	35.0	35.0	35.0	35.0	45.0	35.0
1976	55.0	55.0	—	80.0	80.0	80.0	80.0	80.0	90.0	90.0	70.0	70.0	75.4
1977	80.0	90.0	90.0	90.0	115.0	115.0	90.0	90.0	90.0	—	75.0	80.0	91.4
1978	90.0	90.0	100.0	110.0	110.0	110.0	120.0	185.0	185.0	185.0	165.0	165.0	134.6
1979	180.0	200.0	220.0	220.0	220.0	177.0	155.0	155.0	136.0	136.0	115.0	110.0	168.7
1980	150.0	134.4	115.0	86.0	86.0	86.0	110.0	110.0	110.0	110.0	110.0	110.0	109.8
1981													

Source: U.S. Bureau of Labor Statistics



Average Price of Hides (Packer Heavy Native Steers)[1] —F.O.B. Shipping Point In Cents Per Lb.

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1970	12.3	12.8	12.8	14.1	13.4	13.4	12.3	13.5	13.0	13.1	13.1	11.0	12.9
1971	10.4	11.5	11.5	15.8	16.8	14.1	14.8	14.8	15.5	15.3	16.8	16.3	14.5
1972	17.8	19.0	23.3	25.5	28.0	29.3	29.3	34.0	33.5	40.5	43.0	32.0	29.6
1973	34.0	33.5	28.3	38.3	36.3	33.8	36.3	38.3	35.5	36.3	32.8	28.2	34.3
1974	29.3	—	24.1	26.3	26.3	23.3	25.8	25.3	24.5	17.3	17.5	14.3	23.1
1975	11.8	12.5	16.3	27.5	25.3	25.8	25.3	25.3	25.8	28.0	30.8	26.3	23.4
1976	31.5	29.8	30.0	34.9	39.0	34.8	36.3	37.3	38.3	31.8	29.0	32.3	33.8
1977	35.8	36.3	37.3	40.1	41.3	36.3	38.1	36.8	34.8	33.8	34.8	38.0	37.0
1978	38.8	37.8	37.3	41.3	41.8	45.8	47.8	53.0	59.0	57.3	54.8	51.8	47.2
1979	60.3	65.3	91.3	89.3	90.5	82.9	77.7	70.8	65.4	67.7	59.3	57.1	73.1
1980	59.1	48.7	39.4	38.1	33.8	38.2	43.9	53.3	43.0	49.1	54.3	50.1	45.9
1981													

[1] Over 53 pounds. *Source: Bureau of Labor Statistics*

Average Factory Price of Footwear in the United States In Dollars Per Pair

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1969	4.79	4.86	4.89	5.07	4.92	4.94	4.97	5.05	5.10	4.99	4.98	5.27	4.98
1970	5.11	5.18	5.36	5.20	4.97	5.02	5.10	5.23	5.15	5.09	5.11	5.54	5.17
1971	5.39	5.37	5.41	5.40	5.18	5.21	5.38	5.21	5.16	5.17	5.13	5.45	5.29
1972	5.45	5.48	5.54	5.67	5.48	5.52	5.75	5.59	5.55	5.41	5.39	6.00	5.56
1973	6.32	6.15	6.19	6.28	6.09	6.11	6.30	6.24	6.29	6.20	6.16	6.63	6.24
1974	6.84	6.67	6.81	6.76	6.91	6.86	6.99	6.90	7.20	7.25	7.31	7.63	6.99
1975	7.48	7.64	7.50	7.43	7.63	7.63	7.49	7.43	7.45	7.46	7.63	7.29	7.50
1976	8.00	7.87	8.07	8.16	8.23	8.23	8.32	8.34	8.63	8.21	8.75	8.73	8.28
1977	8.61	8.40	8.63	8.81	8.53	8.39	8.44	8.36	8.51	8.28	8.62	9.00	8.54
1978	8.50	8.39	8.76	9.35	9.51	9.37	9.41	8.66	9.40	9.37	9.61	10.31	9.20
1979	9.73	9.84	9.68	10.23	10.00	10.48	11.74	10.31	10.30	10.46	11.15	11.47	10.60
1980[1]	11.67	11.83	11.81	12.27	12.16	11.37	11.40	11.94	11.08	11.25	11.45	12.14	11.69
1981													

[1] Preliminary. *Source: Tanners' Council of America*

U.S. Exports of Hides and Skins In Millions of Dollars

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1971	11.6	12.0	14.9	11.5	13.1	12.9	7.1	11.6	12.5	15.2	16.2	17.2	155.8
1972	13.5	12.9	19.2	15.9	19.1	19.3	32.6	24.0	24.4	36.1	40.8	37.3	292.0
1973	35.9	45.5	44.2	30.9	33.5	25.4	23.7	24.1	25.6	31.0	29.4	27.9	377.0
1974	29.0	31.2	31.8	31.6	31.9	22.5	30.0	26.7	24.6	27.9	25.5	26.4	339.1
1975	22.7	22.8	24.5	25.1	24.6	23.4	22.5	23.0	25.8	24.9	29.0	28.1	296.3
1976	34.8	28.3	42.4	45.3	51.5	43.1	44.0	45.2	44.9	48.1	46.1	48.5	522.3
1977	50.5	47.2	55.8	53.3	48.0	49.1	51.8	46.5	50.4	39.3	38.2	52.9	582.9
1978	45.5	47.6	58.5	61.3	55.4	55.8	47.5	58.8	54.4	60.1	58.5	91.2	694.6
1979	61.6	77.4	98.3	91.7	101.4	88.3	78.7	91.8	80.0	72.0	78.7	71.8	991.7
1980	60.8	75.1	78.2	59.0	61.8	49.9	45.9	52.1	48.8	53.0	50.5	58.5	693.7
1981	57.5												

Source: U.S. Department of Commerce

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Hogs

U.S. commercial hog slaughter in 1980 increased 7.8 percent from the 1979 total, to nearly 96.1 million head. The largest year-to-year increases occurred in the first half of the year as producers responded to severe financial losses by slaughtering more sows and boars than in 1979 and by adding fewer hogs to the breeding inventory. Commercial sow slaughter in the first half of 1980 exceeded year-earlier levels by 30 percent and boar slaughter was up 35 percent. The average live weight of hogs slaughtered in 1980 was 242 pounds, unchanged from 1979. Pork production in 1980 was 8 percent larger than in 1979.

Preliminary USDA cost of production estimates indicated that net returns to farrow-to-finish producers and feeder pig producers fell sharply in 1980, gross returns to farrow-to-finish producers (who supply about 75 percent of the hogs for slaughter) dropped to about $40 per cwt. for hogs sold in 1980, from $43 in 1979. Cash production costs were estimated to average $41 per cwt. sold in 1980, up from $37 in 1979. Nearly half of the increase in direct cash costs in 1980 was in items other than feed.

The inventory of hogs and pigs on March 1, 1981 in the 14 states conducting quarterly hog surveys was estimated at 50.1 million head, 9 percent below the March 1, 1980 inventory, according to the Crop Reporting Board of the USDA. (The 14 quarterly-reporting states account for about 85 percent of the U.S. hog and pig inventory.)

The December 1980–February 1981 pig crop in the 14 reporting states was 10 percent below the 1980 total and 3 percent less than in 1979. High temperatures in the summer of 1980 reduced conception rates and contributed to the reduction in the number of sows farrowed during December–February to 89 percent of the previous year and 92 percent of the same period two years earlier. In addition, March–May 1981 farrowing intentions in the 14 states were 10 percent smaller than for the same period in 1980 and 13 percent below the comparable period in 1979. In recent years, July–September hog slaughter has ranged from 98.7 to 102.3 percent of the preceding December–February pig crop, and October–December slaughter has ranged between 83.1 and 87.9 percent of the preceding March–May pig crop. The number of sows that farrow between June and November 1981 will determine hog slaughter levels during the first half of 1982.

Futures Markets

Live hog futures are traded on the Chicago Mercantile Exchange (30,000 lb. contract), and on the MidAmerica Commodity Exchange in Chicago (15,000 lb. contract).

World Hog Numbers in Specified Countries In Millions of Head

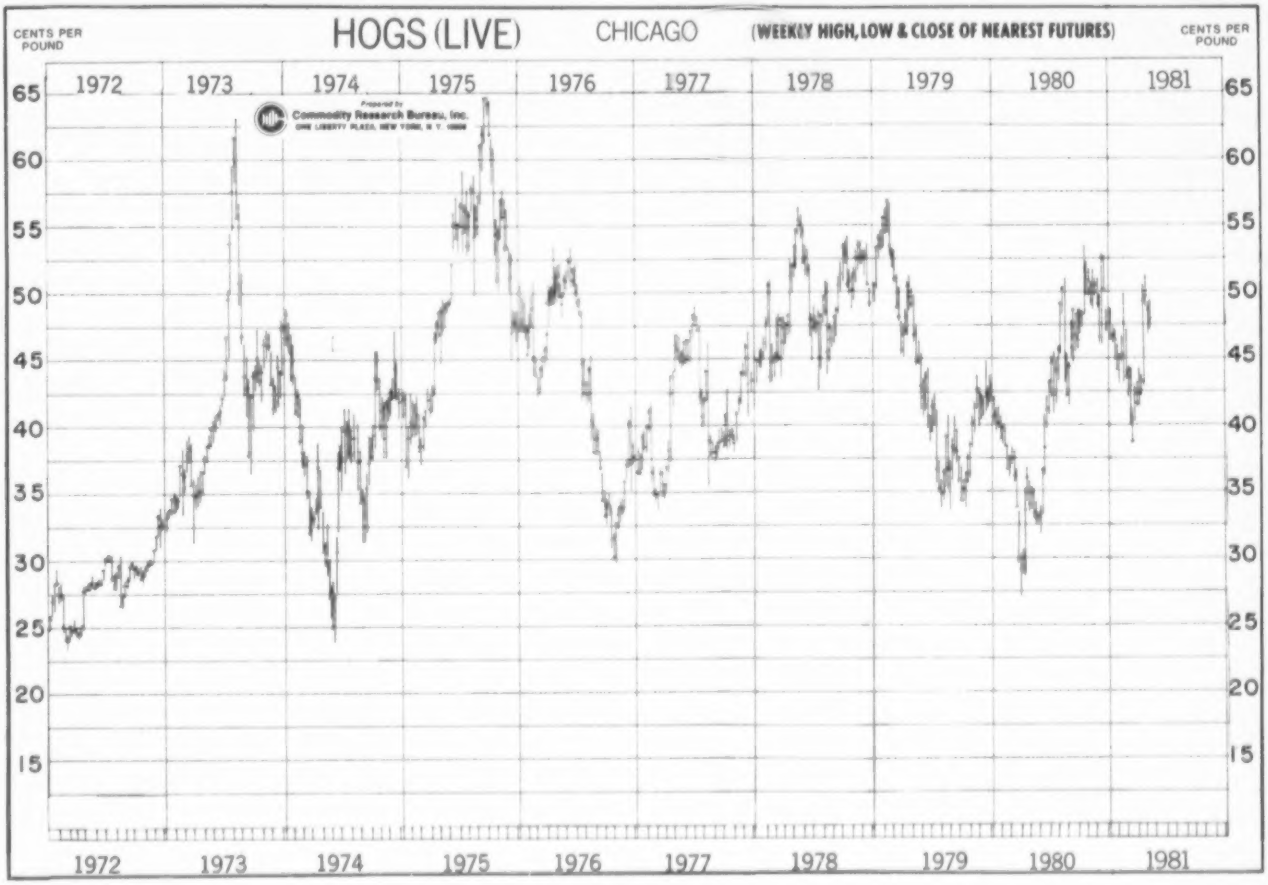
Year	Brazil	Denmark	France	W. Germany	Hungary	Italy	Japan	Mexico	Philippines	Poland	China[3]	Un. Kingdom	United States	U.S.S.R.	World
1970	31.5	8.4	10.5	19.3	5.7	9.2	6.3	10.3	12.0	14.8	220.0	8.1	57.0	56.1	599.1
1971	32.1	8.7	11.6	21.0	7.3	9.0	6.9	10.0	12.5	13.9	223.0	8.5	67.3	67.5	638.4
1972	33.0	8.7	11.3	20.0	7.6	8.2	7.0	11.0	7.7	16.9	228.0	8.9	62.4	71.4	651.1
1973	34.0	8.7	11.4	20.0	6.9	8.2	7.3	9.4	8.6	19.0	231.4	8.8	59.0	66.6	651.3
1974	35.0	8.2	11.4	20.5	8.0	8.2	8.0	11.7	9.3	21.5	234.9	9.3	60.6	70.0	671.5
1975	43.5	8.1	12.0	20.2	8.3	8.8	7.7	12.1	6.6	21.7		7.9	54.7	72.3	
1976	36.0	7.6	11.5	19.8	7.0	8.9	7.5	12.0	6.5	21.6		7.7	49.3	57.9	364.1
1977	36.8	7.9	11.5	20.6	7.9	9.1	8.1	12.3	5.7	16.8		8.2	54.9	63.1	380.3
1978	37.6	8.2	11.5	21.4	7.9	9.4	8.8	12.6	6.9	20.6		7.7	56.5	70.5	402.6
1979	36.0	9.2	11.3	22.6	8.0	8.9	9.5	12.7	7.2	21.1		8.0	60.4	73.5	416.8
1980[1]	36.8	9.5	11.1	22.4	8.4	8.8	10.0	12.8	7.6	21.0		7.8	67.4	73.9	429.1
1981[2]	38.0	9.7	10.9	22.5	8.2	9.2	9.5	12.4	7.8	19.0		7.8	64.5	73.5	427.1

[1] Preliminary. [2] Estimate. [3] Mainland. *Source: Foreign Agricultural Service, U.S.D.A.*

Hogs and Pigs on U.S. Farms on December 1 In Thousands of Head

Year	Georgia	Illinois	Indiana	Iowa	Kansas	Kentucky	Minnesota	Missouri	Nebraska	No. Carolina	Ohio	South Dakota	Tennessee	Wisconsin	Total
1968	1,648	7,415	4,499	15,852	1,767	1,431	3,364	4,562	3,226	1,518	2,583	1,860	1,163	1,768	60,829
1969	1,780	6,842	4,499	13,720	1,643	1,400	3,263	4,197	3,000	1,580	2,557	1,674	1,163	1,680	57,046
1970	2,065	7,630	5,129	16,110	2,202	1,680	3,752	5,120	3,691	1,985	2,838	2,009	1,395	1,932	67,285
1971	1,962	6,600	5,020	14,853	2,100	1,394	3,544	4,659	3,322	1,850	2,611	1,868	1,269	1,777	62,412
1972	1,884	6,650	4,850	14,200	2,100	1,255	3,550	4,350	3,300	1,739	2,320	1,739	1,050	1,475	59,017
1973	1,840	7,350	4,875	14,700	2,000	1,280	3,976	4,325	3,455	1,950	2,274	2,175	940	1,540	60,614
1974	1,590	6,500	4,300	13,400	1,750	1,100	3,700	3,900	3,050	1,890	1,950	1,700	880	1,400	54,693
1975	1,300	5,600	3,900	12,600	1,650	1,000	3,000	3,200	2,700	1,900	1,675	1,400	920	1,150	49,267
1976	1,600	6,400	4,000	14,200	1,850	1,080	3,600	3,750	3,100	1,940	1,900	1,500	1,010	1,250	54,934
1977	1,720	6,100	4,100	14,500	2,000	1,140	4,000	3,700	3,150	2,300	1,750	1,580	1,180	1,378	56,539
1978	1,800	6,550	4,400	15,100	2,000	1,150	4,100	4,100	3,650	2,350	1,900	1,620	1,300	1,650	60,100
1979	2,360	6,950	4,850	16,200	2,090	1,470	4,900	4,650	4,150	2,650	2,120	2,000	1,400	1,830	67,353
1980[1]	2,300	6,600	4,600	16,100	1,900	1,220	5,100	3,980	3,900	2,460	2,150	1,860	1,140	1,680	64,520

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*



Salient Statistics of Pigs and Hogs in the U.S.

Year	Pig Crop					Value of Hogs on Farms, Dec. 1		Hog Marketings Ths. Head	Quantity Produced (Live Wt.) Mil. Lbs.	Value of Production Mil. $	Hogs Slaughtered in Thousand Head				
	Spring[2]		Fall[3]								Commercial				
	Sows Farrowed	Pigs Saved	Sows Farrowed	Pigs Saved	Total Pig Crop	$ Per Head	Total Million $				Federally Inspected	Other	Total	Farm	Total
	In Thousands of Head														
1970	7,134	52,126	6,882	49,588	101,921	23.50	1,584	86,919	21,823	4,955	78,187	7,630	85,817	1,235	87,052
1971	7,303	51,918	6,297	46,006	98,512	28.50	1,780	98,644	22,832	3,991	86,667	7,771	94,438	1,210	95,648
1972	6,512	47,523	5,967	43,053	90,828	42.00	2,477	89,555	20,919	5,245	78,759	5,948	84,707	1,158	85,865
1973	6,459	46,125	5,864	41,998	88,199	60.40	3,663	82,419	20,154	7,738	72,264	4,531	76,795	1,095	77,890
1974	6,372	44,792	5,466	38,952	83,954	44.90	2,457	85,504	19,976	6,838	77,071	4,691	81,762	1,321	83,083
1975	4,973	35,530	4,952	35,656	71,186	80.40	3,959	73,595	16,799	7,751	64,926	3,761	68,687	1,193	69,880
1976	5,777	42,177	5,850	42,218	84,395	47.00	2,583	75,744	18,111	7,844	70,454	3,330	73,784	1,175	74,959
1977	6,050	42,960	6,009	43,202	86,162	63.20	3,575	80,917	19,124	7,536	74,019	3,285	77,303	1,139	78,442
1978	6,034	42,481	6,398	46,031	88,512	83.20	5,023	81,428	19,611	9,136	74,139	3,176	77,315	1,102	78,417
1979[1]	7,179	50,571	7,306	52,120	102,691	56.10	3,775	92,371	22,617	9,444	85,425	3,674	89,099	1,080	90,179
1980[1]	7,231	52,302	6,841	49,332	101,634	74.70	4,822				91,873	4,203	96,076		
1981[4]	6,780	48,477													

[1] Preliminary. [2] December—May. [3] June—November. [4] Breeding intentions. *Source: Statistical Reporting Service, U.S.D.A.*

Cold Storage Holdings of Frozen Pork[1] in the U.S. on First of Month In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1968	285.9	289.1	291.8	305.5	354.9	387.3	326.0	245.0	196.4	197.1	222.4	236.9
1969	256.3	249.3	264.3	270.2	324.0	298.7	245.7	196.2	163.3	173.9	201.5	220.6
1970	210.9	210.4	237.4	268.5	329.0	350.5	304.3	254.7	217.5	210.0	246.2	303.5
1971	336.1	351.1	338.8	387.0	463.6	494.8	477.3	402.3	330.0	306.9	310.4	325.3
1972	330.0	301.1	289.5	327.7	395.8	381.5	319.6	255.7	203.5	192.1	208.9	242.3
1973	214.2	203.1	201.6	239.6	248.4	258.8	252.2	200.8	179.2	196.0	223.6	277.2
1974	286.1	300.1	309.7	346.6	399.1	412.3	355.4	291.8	257.7	248.6	270.3	302.8
1975	306.7	294.4	299.6	299.3	345.1	323.6	284.3	229.7	185.9	189.5	221.9	269.3
1976	249.1	216.7	206.2	228.9	250.9	255.4	219.0	176.7	157.3	175.6	201.5	219.1
1977	212.1	197.0	203.4	224.7	264.6	269.9	227.9	178.9	145.5	158.5	166.0	208.5
1978	185.9	174.9	172.4	215.8	281.7	280.6	260.2	219.9	178.7	177.8	207.1	245.2
1979	241.8	224.5	220.4	245.6	278.3	290.2	269.9	225.1	180.2	178.4	219.1	257.2
1980[2]	280.8	285.6	270.4	291.2	344.3	357.6	313.9	263.7	217.3	217.2	267.8	322.0
1981[2]	348.6	351.5	355.9	359.2								
1982												

[1] Excludes lard. [2] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

Hog-Corn Price Ratio[1] at Omaha

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1968	15.8	16.8	16.2	15.9	15.4	17.1	18.4	18.1	16.8	15.3	14.9	15.8	16.2
1969	16.3	17.1	17.0	16.2	17.8	19.8	21.1	22.0	22.1	21.7	22.0	23.0	19.5
1970	22.8	23.5	21.7	19.6	18.8	18.8	19.5	16.2	14.5	13.2	11.5	10.8	16.9
1971	11.0	13.2	11.6	11.3	11.8	12.2	13.9	15.1	16.3	17.2	16.7	16.6	13.6
1972	19.7	20.6	19.0	18.2	19.7	21.5	22.8	23.5	22.6	21.8	20.6	20.5	20.6
1973	21.5	23.3	25.4	23.4	19.5	16.9	19.9	20.8	18.4	17.8	16.9	15.7	19.3
1974	14.8	13.4	12.5	12.1	10.2	10.0	11.2	10.5	10.3	10.6	11.0	11.8	11.3
1975	12.6	14.1	14.3	14.1	16.4	17.9	19.4	18.6	20.7	21.2	19.4	18.5	16.9
1976	18.6	18.6	17.7	18.3	17.7	17.6	16.8	16.2	15.1	13.7	14.4	16.4	16.5
1977	16.4	16.8	15.9	16.0	18.8	20.7	23.8	26.4	24.6	22.6	19.2	21.4	20.2
1978	22.7	24.0	22.2	20.4	20.9	20.6	21.8	24.5	25.7	25.5	23.5	23.4	22.9
1979	24.5	25.4	22.6	19.9	18.1	15.2	14.1	15.4	16.2	14.6	15.3	16.0	18.0
1980	16.5	16.2	15.2	12.3	12.0	13.8	15.3	16.1	15.6	15.2	13.8	13.5	14.5
1981	12.5												
1982													

[1] Ratio computed by dividing average price packer and shipper purchases of barrows and gilts by average price No. 2 yellow corn both at Omaha. This ratio represents the number of bushels of corn required to buy 100 pounds of live hogs.
Source: Economic Research Service, U.S.D.A.

Federally Inspected Hog Slaughter in the United States In Thousands of Head

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1968	6,496	5,697	6,238	6,483	6,407	5,125	5,454	5,942	6,348	6,410	6,571	6,619	74,789
1969	6,814	6,245	6,809	6,852	6,045	5,591	5,739	5,708	6,611	7,100	6,825	6,344	75,682
1970	6,170	5,507	6,415	6,678	5,877	5,685	5,774	6,045	7,034	7,662	7,350	7,990	78,187
1971	7,489	6,379	8,266	7,794	6,932	6,983	6,220	6,922	7,379	7,190	7,566	7,547	86,667
1972	6,400	6,280	7,800	6,733	6,793	6,313	5,276	6,512	6,420	7,048	6,988	6,197	78,759
1973	6,641	5,713	6,652	5,992	6,638	5,711	4,996	5,569	5,348	6,613	6,534	5,859	72,264
1974	6,804	5,584	6,568	6,867	7,077	5,894	5,722	6,363	6,523	7,023	6,402	6,243	77,071
1975	6,349	5,540	5,751	6,361	5,375	5,077	4,657	4,627	5,217	5,379	5,085	5,508	64,926
1976	5,400	4,873	6,325	5,827	5,086	5,146	4,905	5,968	6,361	6,929	7,110	6,525	70,454
1977	5,840	5,825	7,236	6,400	5,877	5,695	4,908	6,149	6,514	6,507	6,885	6,186	74,019
1978[1]	5,969	5,840	6,794	6,213	6,298	5,778	5,402	6,227	6,203	6,576	6,737	6,101	74,139
1979[1]	6,393	5,693	7,113	6,962	7,284	6,678	6,734	7,662	6,840	8,736	8,097	7,234	85,425
1980[1]	8,036	7,277	7,856	8,454	8,165	7,279	6,910	6,745	7,600	8,404	7,361	7,788	91,873
1981[1]	7,768	6,873	7,988										
1982													

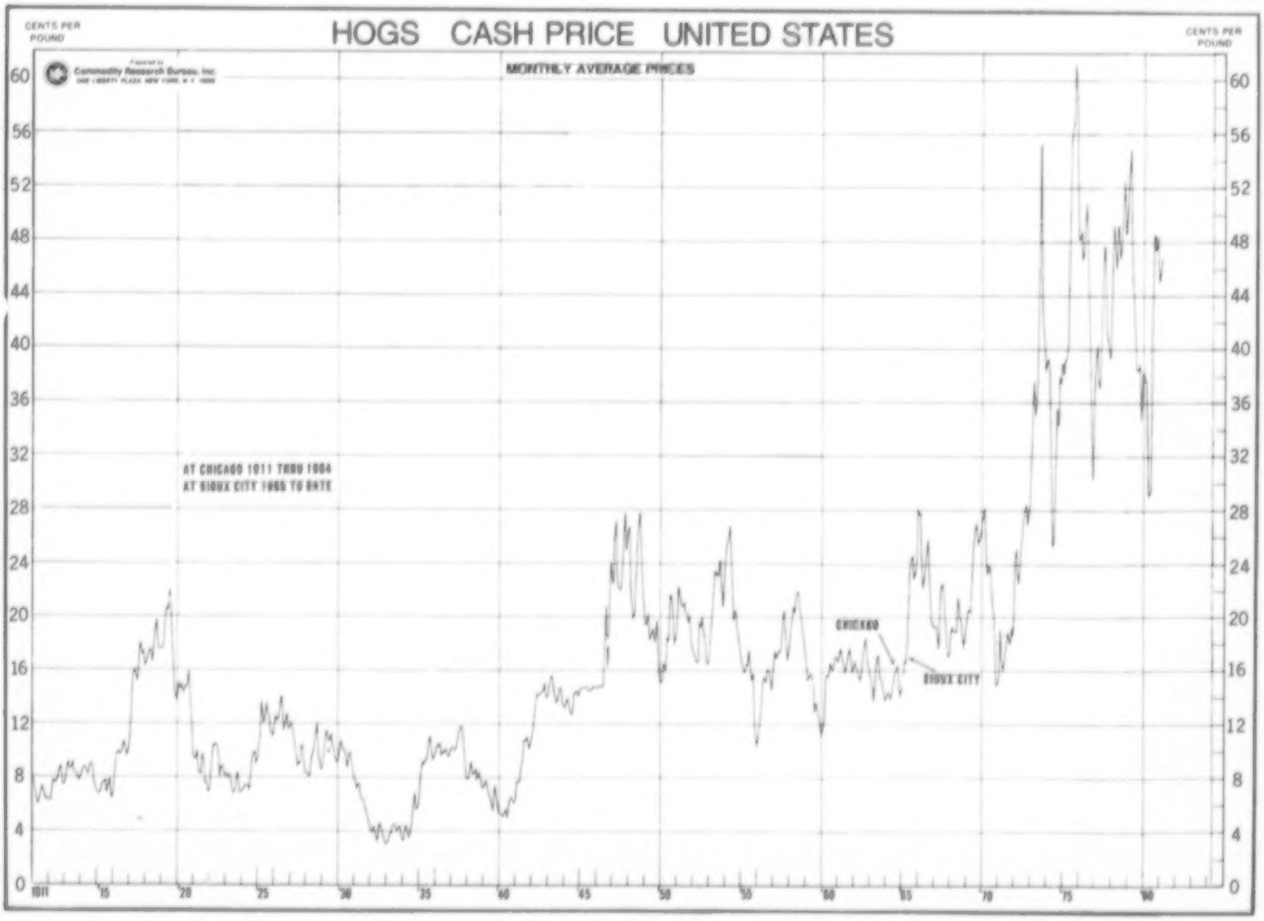
[1] Preliminary. *Source: Statistical Reporting Service, U.S.D.A.*

HOGS

Average Wholesale Price of Hogs, Average (All Weights) at Sioux City In Dollars Per 100 Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1972	24.02	25.10	23.19	22.62	24.76	25.71	27.24	27.87	28.41	27.37	26.91	29.33	26.58
1973	32.44	36.23	38.17	35.60	36.36	38.44	46.96	56.67	43.62	42.02	40.81	39.55	40.10
1974	40.22	38.98	34.71	30.36	25.80	27.29	36.15	37.49	35.69	38.96	38.14	39.81	34.75
1975	38.96	39.69	39.59	40.74	46.42	51.31	57.25	58.12	61.19	58.76	49.78	48.36	48.30
1976	48.23	48.92	46.76	48.06	48.96	50.91	48.31	44.03	39.39	32.69	31.96	38.28	43.19
1977	39.65	40.40	37.61	37.20	41.94	43.89	45.76	44.34	41.39	40.97	39.44	44.13	41.12
1978	46.08	49.26	47.77	46.22	49.25	48.19	46.94	48.83	50.34	52.58	48.68	49.73	48.67
1979	52.11	54.93	49.66	45.29	43.77	39.98	38.58	38.41	38.80	34.74	36.13	38.30	42.13
1980	37.58	37.61	33.97	29.08	29.35	34.97	41.78	48.49	47.42	48.36	46.44	45.07	40.01
1981	41.67	42.78											
1982													

Source: Department of Agriculture



High, Low & Closing Prices of June Live Hogs Futures at Chicago In Cents per Pound

Year of Delivery		Year Prior to Delivery									Delivery Year						Life of Delivery Range
		Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	
1978	High	41.52	41.30	39.00	38.10	34.60	35.85	34.87	36.80	41.10	44.17	48.75	52.25	52.95	56.27	53.75	56.27
	Low	38.05	37.80	35.60	33.85	32.70	32.95	33.40	34.75	36.00	39.95	44.20	45.50	49.90	51.12	50.10	32.70
	Close	40.55	40.10	37.90	34.20	33.10	33.72	34.75	36.55	40.95	44.17	45.75	50.85	51.85	52.90	50.57	—
1979	High	45.75	50.00	48.67	45.77	45.80	50.80	52.10	51.92	52.00	53.20	56.40	54.92	51.25	50.37	44.30	56.40
	Low	43.30	45.60	38.60	40.80	42.55	43.77	47.65	48.30	46.25	46.87	51.25	47.10	47.15	43.90	40.70	37.90
	Close	45.70	48.85	42.70	45.57	44.47	49.60	49.70	50.65	46.90	52.35	54.10	48.00	50.25	44.15	42.57	—
1980	High	44.10	44.60	45.00	44.05	43.70	46.37	43.70	46.90	45.72	46.20	43.00	42.95	36.80	35.40	40.80	46.90
	Low	42.05	39.60	38.35	38.00	37.05	40.80	37.85	41.60	42.00	41.10	40.10	33.50	31.30	32.47	31.90	31.30
	Close	43.62	39.75	42.10	38.40	43.40	41.80	42.10	42.97	43.97	43.10	41.47	34.30	34.47	33.00	39.75	—
1981	High	45.60	45.05	47.70	51.22	52.80	57.35	59.50	61.80	63.25	53.90	55.55	49.90	51.50			
	Low	42.40	43.77	42.65	46.80	49.35	50.40	53.80	56.25	52.02	50.75	48.87	43.52	48.25			
	Close	44.37	44.70	46.45	50.80	50.47	56.12	57.77	61.80	52.02	52.65	48.87	49.82	49.00			
1982	High	59.90															
	Low	56.40															
	Close	56.55															

Source: Chicago Mercantile Exchange

Month End Open Interest of Live Hogs Futures at Chicago In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	23,335	25,731	22,223	22,612	23,345	15,061	14,999	16,569	19,597	20,328	21,944	19,077
1979	26,338	27,694	25,613	24,204	27,004	30,108	24,544	25,730	26,155	24,313	26,317	24,966
1980	27,387	27,765	21,857	24,795	25,814	29,011	27,635	28,725	31,696	36,962	38,534	26,816
1981	21,267	21,588	20,767	28,147								

Source: Chicago Mercantile Exchange

Volume of Trading of Live Hogs Futures at Chicago In Thousands of Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	136.8	165.6	214.0	159.0	174.7	149.9	116.9	122.4	121.8	150.5	136.1	117.4	1,765.2
1979	143.1	137.9	185.4	132.0	145.1	160.9	144.1	164.5	151.3	154.1	162.9	124.5	1,805.7
1980	152.9	122.3	138.2	158.8	133.8	170.8	189.7	188.6	239.1	258.1	195.3	201.4	2,153.8
1981	174.8	182.0	197.5										

Source: Chicago Mercantile Exchange

Average Live Weight of All Hogs Slaughtered Under Federal Inspection In Pounds Per Head

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average[1]
1975	242	236	236	238	240	244	241	237	238	240	246	246	240.3
1976	243	236	236	236	239	240	238	236	236	238	243	239	238.3
1977	234	233	234	236	239	241	239	237	235	239	243	239	237.4
1978	236	233	234	237	241	244	241	239	239	243	248	247	240.2
1979[2]	241	237	238	240	243	246	246	240	240	242	245	246	242.0
1980[2]	243	239	239	241	244	244	242	239	239	241	246	247	24.20
1981[2]	246	242	241										

[1] Average is weighted by Federally inspected slaughter. [2] Preliminary. *Source: Department of Agriculture*

Average Price Received by Farmers for Hogs in the U.S. In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average[1]
1974	40.10	39.30	35.00	30.60	26.30	24.20	34.30	36.00	33.70	37.10	36.80	38.40	34.20
1975	38.20	38.50	38.60	39.30	45.10	47.40	53.90	56.10	58.60	58.30	49.10	47.60	46.10
1976	47.70	48.00	45.60	47.00	47.60	49.20	47.60	42.60	39.70	32.90	31.20	36.60	43.30
1977	38.10	39.40	37.20	36.00	40.70	42.00	44.80	42.80	40.30	39.90	37.80	41.80	39.40
1978	43.90	47.40	46.40	45.00	47.90	47.60	45.40	47.40	48.00	50.80	47.30	48.00	46.60
1979	50.70	52.60	48.30	44.10	43.20	39.60	37.90	36.20	37.20	33.80	34.50	36.90	41.80
1980[2]	36.20	36.70	33.40	28.00	28.60	33.10	41.20	46.20	46.10	47.20	45.60	43.90	38.87
1981[2]	40.80	41.30	38.80	39.10									

[1] Weighted average by quantities sold. [2] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

Honey

The USDA estimated the 1980 world honey harvest at 732,200 tonnes, compared with the record 737,000 tonne harvest in 1979, and compared with estimated 1980 consumption needs of 740,000 tonnes. Although 1980 world ending stocks were expected to decline to 139,000 tonnes (from 145,000 in 1979), the total quantity of world honey available for export in 1980 was expected to increase by 5 to 7 percent from year earlier levels.

Honey output was expected to increase in Africa, Asia, Oceania, and South America and to decrease in Europe and North America. Argentina was expected to have a reduced exportable supply in 1980.

Beginning stocks in 1981 were expected to be down in most countries, including Argentina, Australia, Canada, France, Japan, the United Kingdom, and the United States. However, the opposite was expected in other countries, including Italy, with Mexico's stocks again unchanged.

U.S. Trends

Honey production in the U.S. in 1980 was projected at 199.6 million pounds, down approximately 15 percent from that of a year earlier. Lower yields per colony were the result of dry, hot weather in the northern plains and in the South. Yields were especially lower in the light-honey (table grade) producing areas such as North and South Dakota. Dark honey (bakery-type) was in relatively better supply. Average yield per U.S. colony was 48 pounds, down from 57 pounds in 1979. The 1980 U.S. crop was produced by 4.14 million colonies, fractionally lower than the 4.16 million in 1979. U.S. honey consumption in 1980 totaled 239 million pounds, down from nearly 280 million in 1979. Per capita consumption was 1.1 pounds, down from the previous year's 1.3 pounds.

At the end of 1980 in the U.S., 40.3 million pounds of honey were on hand for sale, down from 37.8 million pounds reported a year earlier. This was 17 percent of U.S. consumption, compared with 13 percent in 1979.

The U.S. exported an estimated 8.0 million pounds of honey in 1980, down from 8.5 million in 1979.

The sources of U.S. imports vary from year to year, though Mexico has continued as a constant, primary source. In 1979, Mexico and China together accounted for around 65 percent of U.S. imports. Total U.S. imports in 1979 were around 57 million pounds, and estimates were for around 50 million in 1980.

The average price of all honey imported into the U.S. increased during 1980, averaging 94.1 cents per kilogram (kg) during January–July 1980, compared with 82.1 cents per kg for the same period in 1979.

The unit value (average price) of U.S. imports during August, 1980 was 91.0 cents per kg, or over 7 cents above the same month of 1979.

Government Price Support Programs

Loan and purchase rates for the 1981 crop of honey averaged 57.4 cents per pound, 7.1 cents more than in 1980. This 1981 level represents 60 percent of the April 1981 adjusted parity price of 95.6 cents per pound.

Loans and purchases were to be offered on 1981-crop honey stored in bulk and other eligible containers, on or off farms. Producers could apply until March 31, 1982 to request loans that will mature June 30, 1982.

The 1981-crop loan and purchase rates for extracted honey in 60-pound or larger containers, by color and class, are as follows:

Table Honey	*Cents per pound*
White or lighter	58.2
Extra light amber	57.2
Light amber	56.2
Other table and non-table honey	54.2

Honey delivered to CCC by beekeepers to satisfy loans was to be used for domestic food donation programs.

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Commodity Research Bureau, Inc.
ONE LIBERTY PLAZA • NEW YORK, N. Y. 10006

World Production of Honey In Thousands of Metric Tons[2]

Year	Argentina	Australia	Canada	China (Mainland)	Ethiopia	France	W. Germany	Japan	Mexico	Poland	Spain	Turkey	United States	U.S.S.R.	World Total
1968	30.9	44.0	33.4	43.8	*1968–*	18.3	33.1	21.0	80.2	14.6	21.0	30.0	200.1	231.5	993
1969	44.1	29.1	53.3	46.0	*72*	18.3	26.5	14.6	79.4	15.1	22.0	28.5	267.5	226.0	1,065
1970	55.1	49.1	51.0	36.4	*Avg.*	27.6	39.7	16.4	66.1	19.8	20.3	28.2	221.8	237.0	1,053
1971	38.8	42.2	52.0	35.5	*(17.5)*	26.5	33.1	17.0	55.1	22.8	18.1	36.0	197.4	237.0	1,030
1972	49.6	44.6	50.6	36.1		22.0	26.5	13.2	84.0	22.5	19.9	36.1	214.1	240.0	1,080
1973[2]	21.0	18.1	24.8	13.6	18.1	10.5	10.0	7.6	33.0	10.4	9.5	16.8	107.8	124.7	574.0
1974	27.0	21.2	20.8	50.0	18.8	9.7	16.5	7.6	42.0	10.9	9.5	17.2	84.0	79.0	597.4
1975	23.6	20.6	21.1	60.0	19.2	9.0	8.8	6.3	38.0	7.4	10.5	17.1	89.8	76.1	609.4
1976	28.0	21.4	25.4	55.0	19.4	14.5	22.0	6.1	44.0	9.6	11.0	24.1	90.0	82.0	672.1
1977	22.0	14.9	25.4	60.0	19.0	8.2	20.0	6.2	60.0	10.0	12.0	21.7	81.0	86.0	667.6
1978	35.0	18.6	30.6	75.0	20.0	9.5	15.0	8.5	54.0	12.0	11.0	21.7	104.5	72.0	708.8
1979	26.0	18.3	33.0	100.0	20.0	14.4	9.0	7.5	52.0	13.0	12.0	23.7	107.6	80.0	737.1
1980[1]	24.0	21.5	29.2	105.0	20.5	9.0	14.0	5.5	58.0	10.0	13.0	23.0	91.0	80.0	732.0
1981															

[1] Preliminary. [2] Data prior to 1973 are in MILLIONS OF POUNDS. *Source. Foreign Agricultural Service, U.S.D.A.*

Salient Statistics of Honey in the United States

			Honey Production; By States												Wholesale Price Extracted	
Year	Number of Colonies Thous.	Yield Per Colony Lbs.	Total U.S.	California	Florida	Iowa	Minnesota	Texas	Wisconsin	Domestic Disapp.	Imports For Consumption	Domestic Exports	Stocks Jan. 1[2]	Farm Price of All Honey	Bees-Wax	Rec'd by Farmers
			In Millions of Pounds											¢ Lb.		
1968	4,539	42.2	191.4	16.4	20.9	9.9	10.4	9.5	7.6		16.9	8.1	42.8	16.9	61.6	14.7
1969	4,433	60.3	267.5	46.4	25.3	11.0	21.1	11.6	14.8		14.7	9.9	62.7	17.5	61.1	15.2
1970	4,290	51.7	221.8	15.7	25.1	12.8	19.5	10.2	12.7	234.7	8.9	8.1	50.6	17.4	60.2	15.3
1971	4,110	48.0	197.4	19.9	22.2	9.0	12.2	8.4	11.6	220.9	11.4	7.6	30.9	21.8	61.3	18.0
1972	4,068	52.6	214.1	24.5	26.6	6.9	11.8	11.4	7.7	250.1	39.0	4.1	29.8	30.2	62.1	27.0
1973	4,124	58.0	239.1	31.0	33.5	7.5	15.3	9.9	11.4	224.9	10.7	17.6	30.1	44.4	74.4	43.0
1974	4,210	44.6	187.9	23.5	16.2	6.9	9.6	10.3	7.7	212.3	26.0	4.6	37.4	51.0	114.0	49.1
1975	4,206	47.4	199.2	24.5	24.5	5.9	10.9	12.9	5.5	242.8	46.4	4.0	34.4	50.5	103.0	47.8
1976	4,285	46.3	198.4	13.7	27.4	6.6	14.3	9.4	10.3	259.1	66.5	4.7	33.2	49.9	112.0	47.1
1977	4,346	41.1	178.5	13.7	14.4	6.1	12.0	9.0	9.6	241.1	63.9	5.5	34.3	53.0	158.0	49.4
1978	4,081	56.5	230.5	31.2	23.9	4.6	13.9	8.7	6.3	276.7	56.0	8.0	30.1	54.5	174.0	51.1
1979	4,155	57.2	237.8	17.1	28.1	6.2	14.8	11.4	8.8	280.4	57.0	8.5	31.9	59.0	175.0	55.3
1980[1]	4,140	48.2	199.6	23.2	20.3	6.3	13.7	6.9	6.0	239.2	50.0	8.0	37.9			
1981[1]													40.3			

[1] Preliminary. [2] Prior to 1973, data are for producers' stocks for sale as of Dec. 15. *Source: Crop Reporting Board, U.S.D.A.*

Wholesale Price Index of Honey[1] (Extracted) at Chicago 1967 = 100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1968	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.3	16.8
1969	17.1	17.8	18.1	17.4	18.2	19.6	20.6	21.2	22.0	22.5	19.6	19.6	19.5
1970	20.1	20.1	20.1	20.1	18.8	18.8	18.8	18.8	18.8	18.8	18.8	18.8	19.2
1971[2]	18.8	18.8	18.8	18.8	18.8	18.8	20.3	188.0[2]	188.0	188.0	188.0	188.0	
1972	188.0	188.0	188.0	188.0	188.0	188.0	188.0	188.0	188.0	188.0	188.0	188.0	188.0
1973	188.0	188.0	218.0	218.0	231.6	264.4	256.2	258.9	N.A.	258.9	272.5	337.9	244.8
1974	337.9	N.A.	337.9	343.3	343.3	307.9	N.A.	272.5	N.A.	272.5	343.3	343.3	322.4
1975	343.3	343.3	343.3	343.3	332.4	321.5	321.5	N.A.	248.0	N.A.	248.0	N.A.	316.1
1976	N.A.	N.A.	N.A.	223.4	231.6	224.8	N.A.	245.2	N.A.	245.2	235.4	234.3	234.3
1977	228.9	239.8	238.0	231.6	228.9	228.9	242.1	245.2	249.7	244.3	N.A.	247.3	238.6
1978	247.1	245.8	252.5	254.0	255.6	247.4	N.A.	250.5	248.7	248.4	246.4	246.5	249.4
1979	250.0	259.3	270.8	255.8	264.3	286.7	277.7	288.8	283.4	286.4	288.3	283.6	274.6
1980	286.8	289.6	287.1	272.5	284.1	283.0	277.2	283.4	284.0	285.6	285.9	288.7	284.0
1981	298.7	296.9											

[1] White Clover, any state of origin, in 60 lb. cans, wholesaler to baker, confectioner, or other large user. [2] Prior to Aug. 1971, data are in cents per pound. Price for Aug. 1971 was 24.0¢ lb. *Source: Bureau of Labor Statistics* (0254-0101.01)

Interest Rates *(See feature study on page 32)*

Inflation, and Federal Reserve efforts to combat inflation, dominated 1980 interest rate markets.

As it sought to curtail inflation, the Federal Reserve focused on control of the growth of the money supply aggregates, especially the M-1B. The M-1B included currency in circulation and demand (non-interest bearing) deposits. As revised in 1980, it also includes NOW (Negotiable Order of Withdrawal) and ATS (Automatic Transfer System) accounts and credit union share drafts.

Early in 1980, the Federal Reserve Board set a growth target of 4 to 6.5 percent for the M-1B. The process of keeping M-1B growth in line with its targets was not an easy one for the "Fed." In early January, the M-1B was around $390 billion. Stringent monetary policies early in the year affected all interest rates, which skyrocketed by spring. The prime interest rate peaked at a then-record 20 percent, while the M-1B showed negative growth and plummeted to around $381 billion. The Fed then pumped money into the Federal Reserve System until, by mid-August, the M-1B had topped $400 billion and the prime rate had declined to 11 percent. In summer, the Fed acted to curb the renewed growth of the money supply. As money gradually became tighter, the prime interest rate began a second upward movement that climaxed with a 21½ percent record high in December. The tighter money policies finally took hold, and the M-1B closed the year at under $415 billion, a net annual growth of around 6.5 percent.

Several developments served to increase the rate of inflation in 1980. A summer drought contributed considerably to increased costs for many foods. Also, the Iran-Iraq war and the consequent reduction of world crude oil supplies through the Strait of Hormuz caused oil and oil product prices to resume their advance. Oil price increases had been curtailed by the brief United States economic slowdown that followed the high interest rates in the first half of the year. Further compounding the Fed's task of slowing inflation was the late 1980 revision of the M-1B. The inclusion of NOW accounts distorted the Federal Reserve's key measure of money supply growth, and influenced several upward jumps in the M-1B.

In late 1980, then-President-elect Reagan began to detail his plans for a balanced budget by the end of his administration, and those plans furthered the expectations of many for a slower rate of inflation.

Futures Markets

In 1980, the financial futures markets expanded both in general acceptance and in their size as many corporations and individuals began to hedge against the wide swings in interest rates.

In 1980, the major futures market for Treasury bonds and for Government National Mortgage Association (GNMA) bonds was the Chicago Board of Trade, and for Treasury bills was the Chicago Mercantile Exchange.

U.S. Producer (Wholesale) Commodity (All Commodities) Price Index 1967 = 100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1974	146.6	149.5	151.4	152.7	155.0	155.7	161.7	167.4	167.2	170.2	171.9	171.5	160.1
1975	171.8	171.3	170.4	172.1	173.2	173.7	175.7	176.7	177.7	178.9	178.2	178.7	174.9
1976	179.4	179.4	179.7	181.3	181.9	183.2	184.4	183.8	184.8	185.3	185.6	187.1	183.0
1977	188.1	190.2	192.0	194.3	195.2	194.4	194.9	194.6	195.3	196.3	197.0	198.2	194.2
1978	200.1	202.1	203.7	206.5	208.0	209.6	210.7	210.6	212.4	214.9	215.7	217.5	209.3
1979	220.8	224.1	226.7	230.0	232.0	233.5	236.9	238.3	242.0	245.6	247.2	249.7	235.5
1980[1]	254.9	260.2	261.9	262.8	264.2	265.6	270.4	273.8	274.6	277.8	279.1	280.3	268.7
1981[1]	283.5	286.9	289.6										

[1] **Preliminary.** *Source: Bureau of Labor Statistics*

U.S. Retail Price Index (Consumer Price Index for All Items) 1967 = 100

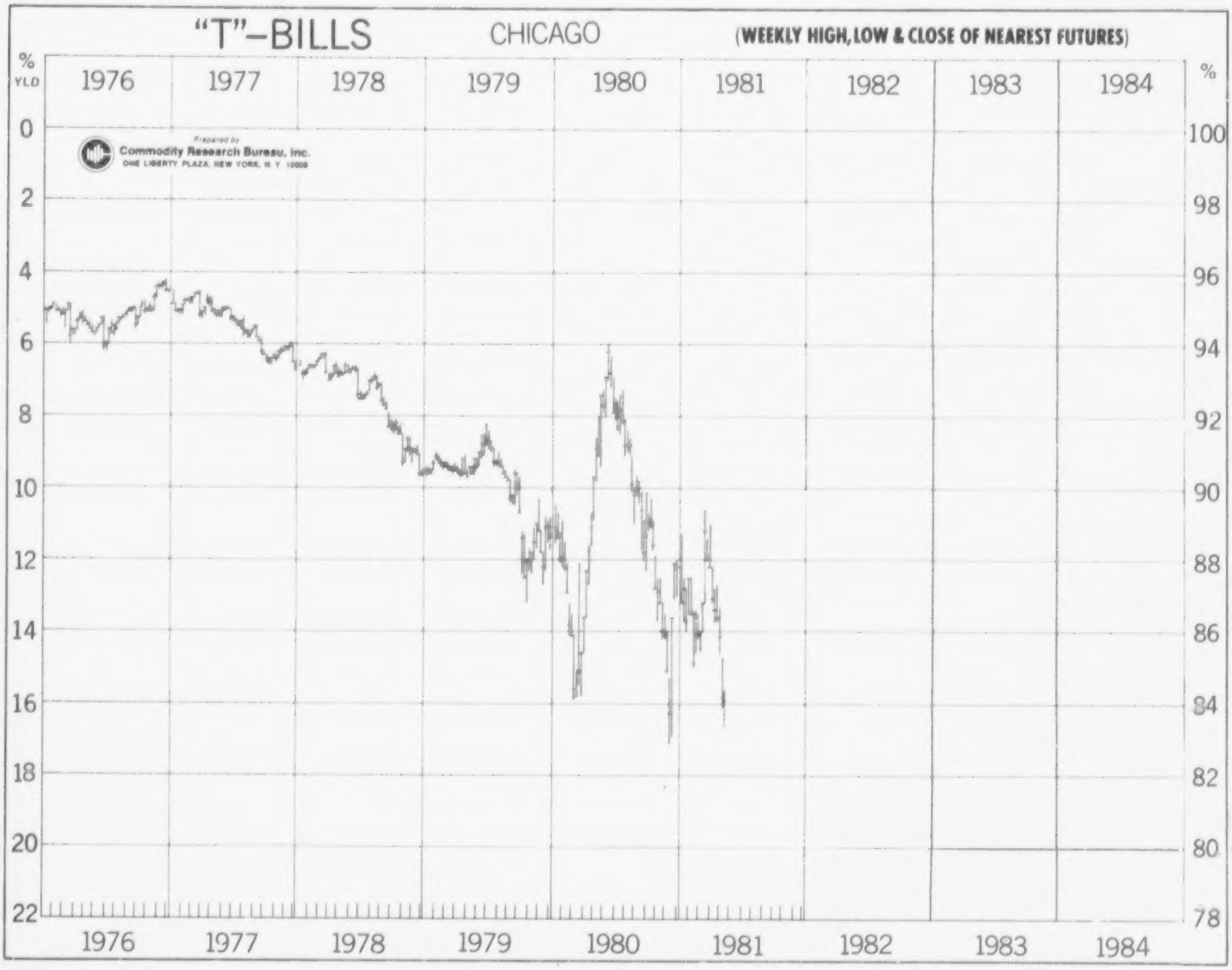
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1974	139.7	141.5	143.1	143.9	145.5	146.9	148.0	149.9	151.7	153.0	154.3	155.4	147.7
1975	156.1	157.2	157.8	158.6	159.3	160.6	162.3	162.8	163.6	164.6	165.6	166.3	161.2
1976	166.7	167.1	167.5	168.2	169.2	170.1	171.1	171.9	172.6	173.3	173.8	174.3	170.5
1977	175.3	177.1	178.2	179.6	180.6	181.8	182.6	183.3	184.0	184.5	185.4	186.1	181.5
1978	187.1	188.4	189.8	191.5	193.3	195.3	196.7	197.8	199.3	200.9	202.0	202.9	195.4
1979	204.7	207.1	209.1	211.5	214.1	216.6	218.9	221.1	223.4	225.4	227.5	229.9	217.4
1980[1]	233.2	236.4	239.8	242.5	244.9	247.6	247.8	249.4	251.7	253.9	256.2	258.4	246.8
1981[1]	260.5	263.2	265.1										

[1] **Preliminary.** *Source: Bureau of Labor Statistics*

Month End Open Interest of Treasury Bond Futures in Chicago In Thousands of Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	3.3	4.4	6.1	8.8	9.7	8.8	10.3	12.6	14.7	27.6	35.7	41.2
1979	41.8	45.0	45.9	46.9	53.9	61.5	63.1	65.7	65.4	65.1	74.1	90.7
1980	71.3	66.4	57.1	70.2	84.8	111.1	110.0	117.2	123.2	153.1	204.8	243.6
1981	240.7	223.6	226.1	230.4								

Source: Chicago Board of Trade



U.S. Industrial Production Index[1] (Seasonally Adjusted) 1967 = 100

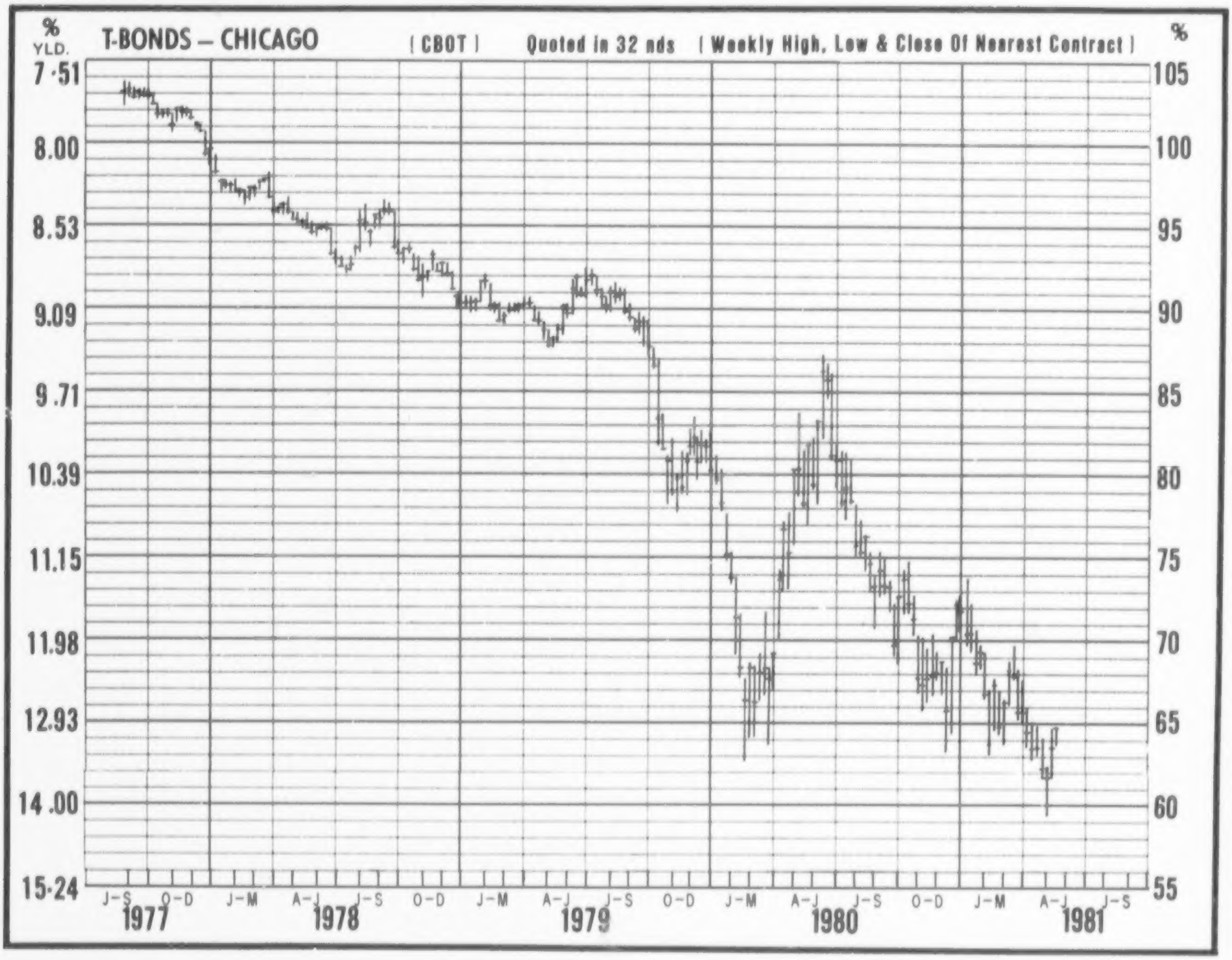
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1971	105.5	106.0	106.0	106.5	107.4	107.4	106.8	105.6	107.1	106.8	107.4	108.1	106.8
1972	108.7	110.0	111.6	113.2	113.8	114.4	115.1	116.3	117.6	119.2	120.2	121.1	115.2
1973	126.3	127.8	128.5	128.5	129.6	129.9	130.4	130.4	131.1	131.4	131.6	131.3	129.8
1974	129.9	129.6	130.0	129.9	131.3	131.9	131.8	131.7	131.8	129.5	124.9	119.3	129.3
1975	115.2	112.7	111.7	112.6	113.7	116.4	118.4	121.0	122.1	122.2	123.5	124.4	117.8
1976	126.1	128.1	128.7	129.0	130.1	130.7	131.2	132.0	131.3	131.3	132.6	133.6	130.5
1977	133.7	134.5	136.3	137.1	138.0	138.9	139.0	139.3	139.6	140.1	140.3	140.5	138.2
1978	140.0	140.3	142.1	144.4	144.8	146.1	147.1	148.0	148.6	149.7	150.6	151.8	146.1
1979	152.0	152.5	153.5	151.1	152.7	153.0	153.0	152.1	152.7	152.7	152.3	152.5	152.5
1980[2]	152.7	152.6	152.1	148.3	144.0	141.5	140.4	141.8	144.1	146.9	149.4	151.0	146.8
1981[2]	151.7	151.1	151.7										

[1] Total Index of the Federal Reserve Index of Quantity Output. [2] Preliminary. *Source: Federal Reserve System*

Volume of Trading of Treasury Bond Futures in Chicago In Thousands of Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	11.5	10.2	14.2	19.1	23.4	33.1	37.8	62.2	60.3	87.7	95.2	98.6	555.4
1979	95.3	98.3	95.5	110.4	181.8	169.1	140.5	167.2	221.2	271.1	249.4	259.9	2,059.6
1980	311.1	332.4	349.3	423.4	520.5	608.6	502.7	516.4	501.2	691.6	722.5	1,009.8	6,489.6
1981	846.7	868.6	975.9	998.9									

Source: Chicago Board of Trade



High, Low & Closing Prices of June Treasury Bonds Futures in Chicago In 32nds of 100%

Year of Delivery		Year Prior to Delivery									Delivery Year						Life of Delivery Range
		Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb	Mar.	Apr.	May	June	
1978	High	FUTURES				102–15	102–21	102–06	101–12	101–01	98–30	97–04	97–19	96–25	95–24	95–07	102–21
	Low	TRADING				101–10	101–27	100–10	99–25	98–11	96–19	95–24	95–25	95–10	94–13	94–06	94–06
	Close	BEGAN AUG. 22, 1977				102–13	102–07	100–10	100–30	99–05	97–11	96–14	95–30	95–15	94–13	94–07	—
1979	High	95–07	94–10	93–16	92–28	95–06	96–03	94–09	93–31	93–15	92–08	92–09	90–27	90–19	90–09	91–01	98–11
	Low	93–29	92–20	91–26	91–03	92–15	93–08	91–00	92–02	90–09	90–01	89–13	89–09	88–02	87–20	89–16	87–20
	Close	94–03	92–20	91–28	92–20	94–21	93–08	91–11	92–30	90–18	91–23	89–21	90–05	88–06	89–22	90–30	—
1980	High	90–31	90–18	92–13	92–12	91–18	89–18	87–13	84–14	85–00	82–24	75–07	71–24	77–27	83–20	87–07	95–31
	Low	88–24	88–08	89–24	89–27	89–09	87–05	78–11	78–15	80–20	74–07	63–15	64–30	67–12	77–00	78–09	63–15
	Close	88–27	89–31	91–27	90–20	89–11	87–21	80–12	83–01	82–29	75–04	69–00	67–27	77–02	79–14	85–25	—
1981	High	79–21	84–00	85–15	81–08	77–00	75–23	75–04	71–20	73–18	74–22	70–15	70–15	67–17			
	Low	71–23	76–30	77–31	74–26	71–27	69–11	67–22	66–05	65–28	69–04	64–05	64–20	61–25			
	Close	77–16	79–03	80–23	75–04	73–26	71–10	68–17	70–02	72–06	70–09	65–31	67–02	61–28			
1982	High	68–14															
	Low	64–11															
	Close	64–15															

Source: Chicago Board of Trade

High, Low & Closing Prices of June 13 Wk. Treasury Bills Futures in Chicago In Points of 100%

Year of Delivery		Year Prior to Delivery									Delivery Year						Delivery Life of Range
		Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	
1978	High	93.59	93.31	93.69	93.57	93.50	93.51	93.28	93.28	93.29	93.17	93.15	93.33	93.49	93.48	93.41	93.80
	Low	92.52	92.53	93.19	93.01	92.95	93.10	92.80	92.92	92.95	92.63	92.78	93.00	93.03	93.09	93.20	92.26
	Close	92.60	93.22	93.61	93.15	93.38	93.29	92.97	93.25	93.13	92.99	93.13	93.02	93.13	93.21	93.23	—
1979	High	92.12	91.87	91.90	91.81	92.11	92.12	91.55	91.08	90.83	90.74	90.88	90.72	90.87	90.84	91.45	92.83
	Low	91.76	91.62	91.49	91.51	91.62	91.40	90.50	90.39	90.14	90.16	90.35	90.43	90.31	90.30	90.50	90.14
	Close	91.76	91.68	91.55	91.75	91.93	91.51	90.58	90.62	90.22	90.65	90.47	90.51	90.50	90.60	91.06	—
1980	High	90.91	91.55	92.59	92.50	92.30	91.65	91.41	91.22	91.01	90.50	89.05	86.40	89.94	92.73	93.97	93.97
	Low	90.51	90.48	91.34	91.54	90.93	90.36	88.10	88.85	89.21	88.37	86.06	84.20	85.40	89.75	92.00	84.20
	Close	90.62	91.46	92.32	91.89	91.11	91.03	89.29	90.55	90.17	88.84	86.49	85.82	89.90	92.30	92.12	—
1981	High	90.90	92.00	92.64	92.04	91.10	89.61	89.77	88.47	88.89	89.43	89.00	89.38	88.95			
	Low	87.51	90.60	91.15	90.65	88.45	87.66	87.47	87.08	85.40	87.31	86.36	86.64	85.52			
	Close	90.79	91.60	91.50	90.72	89.13	88.31	87.51	87.25	88.18	88.89	87.19	88.77	85.55			
1982	High	89.20															
	Low	87.09															
	Close	87.10															

Source: International Monetary Market (Chicago)

Month End Open Interest of 13 Wk.[1] Treasury Bills Futures in Chicago In Thousands of Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	12.5	13.7	15.6	17.6	20.3	23.7	27.7	34.4	33.9	47.9	52.6	59.2
1979	54.2	54.2	52.7	56.4	63.7	61.2	46.8	40.9	41.4	35.4	42.8	36.5
1980	30.2	25.0	28.5	28.2	24.7	25.2	22.9	23.1	21.4	24.2	39.2	42.9
1981	45.7	38.0	32.8	28.9								
1982												

[1] 90-day U.S. Treas. Bill. *Source: International Monetary Market (Chicago)*

Volume of Trading of 13 Wk.[1] Treasury Bills Futures in Chicago In Thousands of Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	37.9	24.7	33.6	41.9	38.9	48.4	39.9	74.1	87.2	98.6	137.0	106.8	772.0
1979	89.8	78.6	103.8	111.5	154.7	193.1	182.0	144.5	204.1	251.7	225.8	190.9	1,930.5
1980	237.5	245.4	290.3	350.1	321.2	250.7	224.4	204.9	231.1	274.3	287.7	401.1	3,338.8
1981	446.6	414.4	408.5	406.6									
1982													

[1] 90-day U.S. Treas. Bill. *Source: International Monetary Market (Chicago)*

Volume of Trading of GNMA (CDR) Futures in Chicago In Thousands of Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	48.4	46.7	57.1	57.2	60.1	75.2	73.6	109.2	96.1	110.9	109.0	109.6	953.2
1979	89.8	79.8	68.1	82.0	99.8	111.8	77.0	95.3	164.5	164.9	157.9	180.4	1,371.1
1980	170.0	155.5	156.3	190.3	219.7	248.4	162.0	151.6	133.9	205.0	214.5	318.7	2,326.3
1981	179.8	159.9	186.5	202.3									

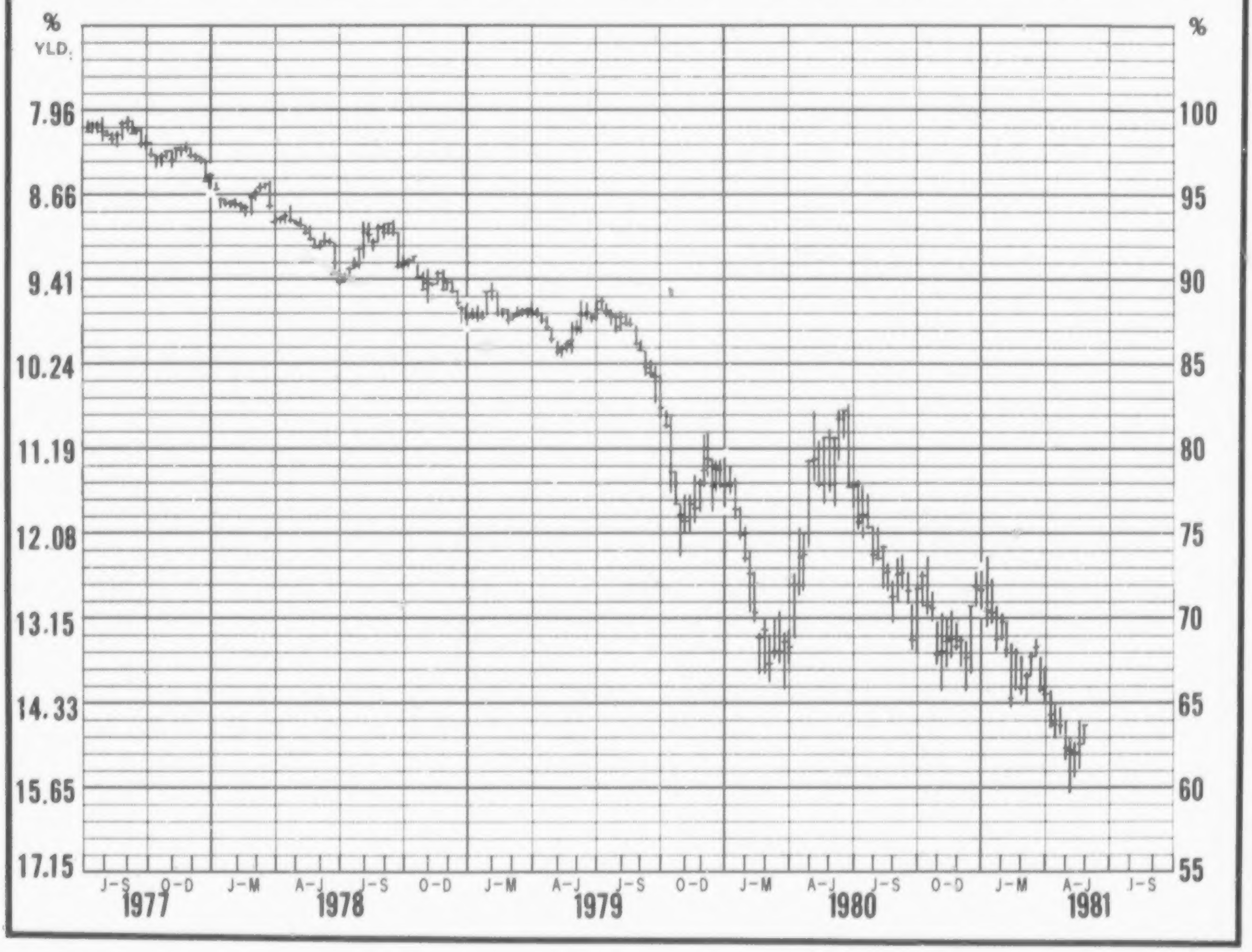
Source: Chicago Board of Trade

Month End Open Interest of GNMA (CDR) Futures in Chicago In Thousands of Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	20.4	19.6	20.3	24.0	27.8	33.5	39.4	43.6	41.6	54.4	60.0	62.7
1979	62.4	63.5	62.9	62.8	68.5	73.3	70.6	75.0	77.0	71.0	76.3	89.0
1980	65.9	54.7	46.1	55.5	60.6	71.9	67.6	63.1	67.1	83.2	98.5	115.2
1981	97.0	97.1	99.8	105.7								

Source: Chicago Board of Trade

GINNIE MAE – CHICAGO (CBOT) Quoted in 32 nds (Weekly High, Low & Close Of Nearest Contract)



High, Low & Closing Prices of June GNMA (CDR) Futures in Chicago In 32nds of 100%

Year of Delivery		Year Prior to Delivery									Delivery Year						Life of Delivery Range
		Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	
1978	High	95–21	95–05	96–17	96–22	97–28	97–30	97–08	96–28	96–19	95–12	94–12	94–28	94–09	93–17	92–22	97–30
	Low	94–00	94–00	94–25	95–20	95–30	96–30	95–30	95–25	95–00	93–27	93–07	93–09	93–05	91–26	91–19	91–19
	Close	94–07	94–28	96–01	96–03	97–20	97–09	96–03	96–16	95–18	94–12	93–30	93–13	93–12	91–28	91.21	—
1979	High	92–15	91–18	89–23	90–08	91–31	92–16	91–13	90–29	90–17	89–16	89–22	88–20	88–09	87–16	88–19	96–20
	Low	91–12	89–10	88–06	87–31	89–24	90–11	88–26	89–15	87–21	87–17	87–12	87–19	85–27	85–14	86–23	85–14
	Close	91–15	89–10	88–07	89–31	91–14	90–24	89–00	90–02	87–30	89–04	87–26	88–00	85–31	86–28	87–20	—
1980	High	88–12	87–09	88–21	88–26	88–03	85–28	82–00	81–16	82–13	79–11	74–11	70–10	76–08	82–05	82–12	93–20
	Low	85–30	85–19	86–20	86–30	85–28	81–27	73–18	75–00	76–16	73–04	65–22	65–18	67–15	76–16	76–18	65–18
	Close	86–02	86–23	88–06	87–16	85–29	82–10	75–31	79–27	79–18	74–00	69–06	68–15	76–00	77–31	81–18	—
1981	High	77–00	82–12	82–02	77–22	74–24	73–15	73–12	70–20	73–04	74–07	70–15	69–16	67–01			
	Low	69–02	76–07	76–06	72–23	69–28	68–11	67–06	66–13	65–31	69–00	65–14	65–19	61–30			
	Close	76–16	77–15	77–15	73–03	71–14	70–05	67–31	69–07	71–27	70–08	66–21	66–21	62–01			
1982	High	67–06															
	Low	63–05															
	Close	63–05															

Source: Chicago Board of Trade

U.S. Money Supply M1-B in 1972 $ In Billions of Dollars

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1974	243.6	241.8	240.6	239.4	237.4	236.9	235.8	233.5	231.3	230.1	229.6	228.1	235.7
1975	226.6	225.4	226.1	224.6	225.7	227.3	225.5	225.8	225.5	223.7	224.1	222.3	225.2
1976	222.5	223.9	224.1	224.5	225.0	224.1	223.8	223.9	223.7	224.9	225.0	225.3	224.2
1977	221.2	220.9	221.0	221.5	221.2	220.9	221.2	221.2	221.8	222.6	222.8	223.1	221.6
1978	224.3	223.1	222.7	223.6	223.7	223.3	222.6	222.1	222.6	221.0	221.2	221.4	222.6
1979	219.7	217.9	217.8	219.1	216.6	217.2	216.7	215.9	214.6	212.7	211.1	210.0	215.8
1980[1]	207.8	206.8	204.1	199.7	197.9	198.6	200.5	202.6	203.2	203.1	202.3	198.9	202.1
1981[1]	199.4	198.1	199.0										

[1] Preliminary. *Source: Federal Reserve System*

U.S. Money Supply M2 in 1972 $ In Billions of Dollars

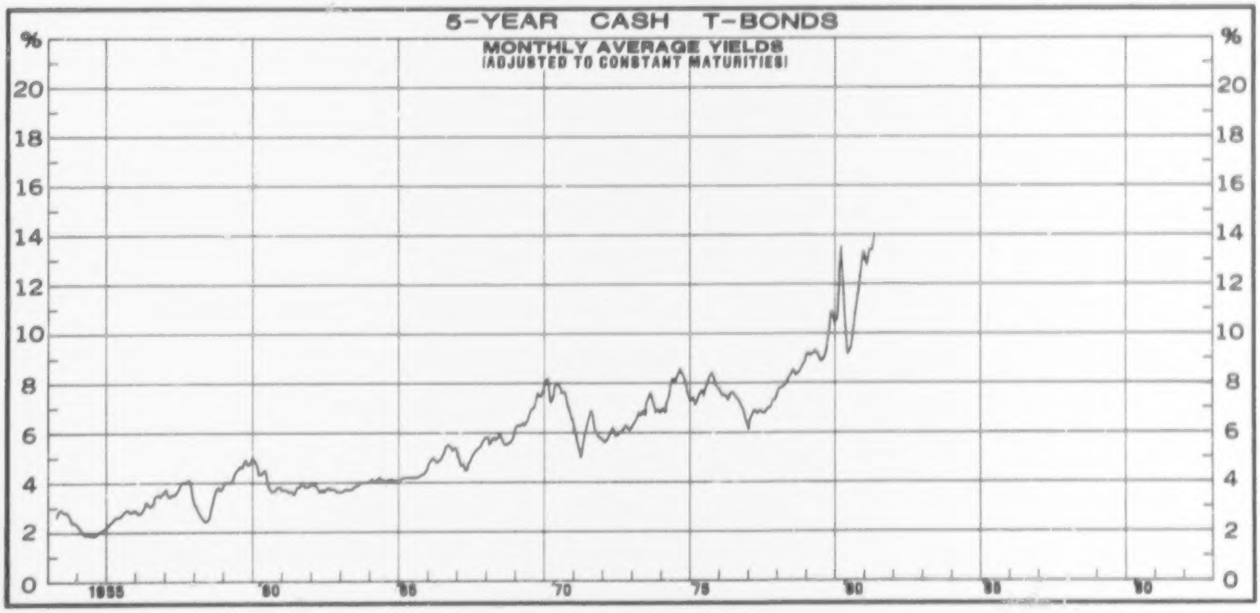
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1974	771.4	767.3	766.2	763.0	757.4	754.3	752.0	744.5	738.6	735.3	734.0	729.3	751.1
1975	728.1	731.3	737.5	742.8	751.0	758.1	759.2	763.2	764.1	763.5	766.8	768.0	752.8
1976	774.0	784.7	790.1	796.8	803.7	803.6	805.1	811.2	815.6	822.6	828.5	835.4	805.9
1977	840.1	841.9	845.1	848.3	852.7	853.7	856.1	859.2	861.7	865.3	866.5	868.1	854.9
1978	686.6	867.6	867.2	867.0	865.4	863.2	862.1	863.0	863.1	862.0	862.4	861.7	864.4
1979	858.1	853.3	853.2	853.8	850.0	850.8	848.3	847.0	843.4	838.5	833.0	828.1	846.5
1980[1]	821.4	817.8	810.6	801.4	801.4	805.7	817.7	821.5	818.9	816.5	814.6	808.0	812.9
1981[1]	806.0	803.5	809.0										

[1] Preliminary. *Source: Federal Reserve System*

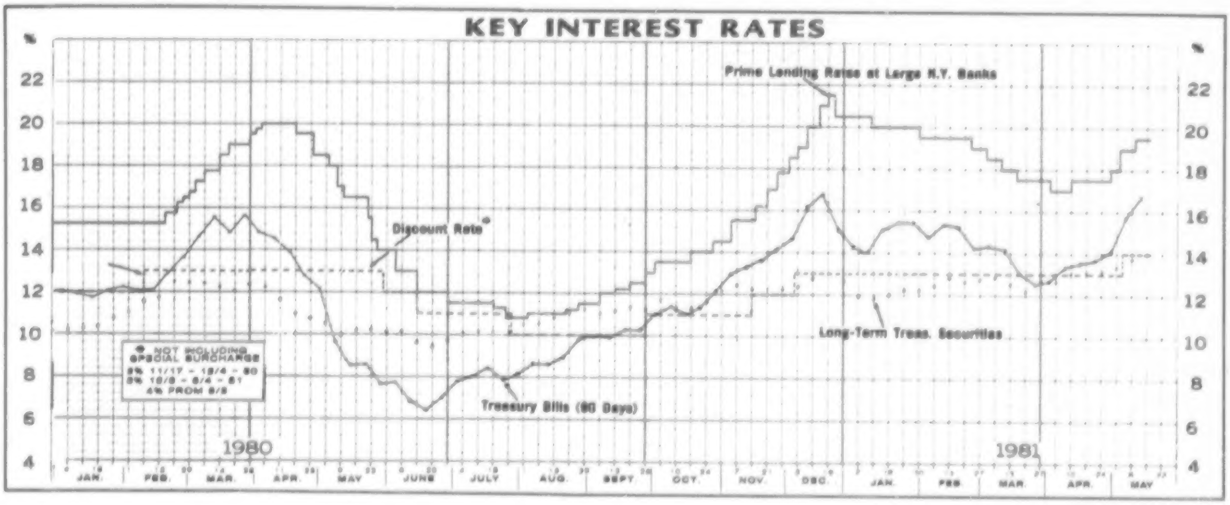
U.S. Gross National Product, National Income, and Personal Income In Billions of Current Dollars[1]

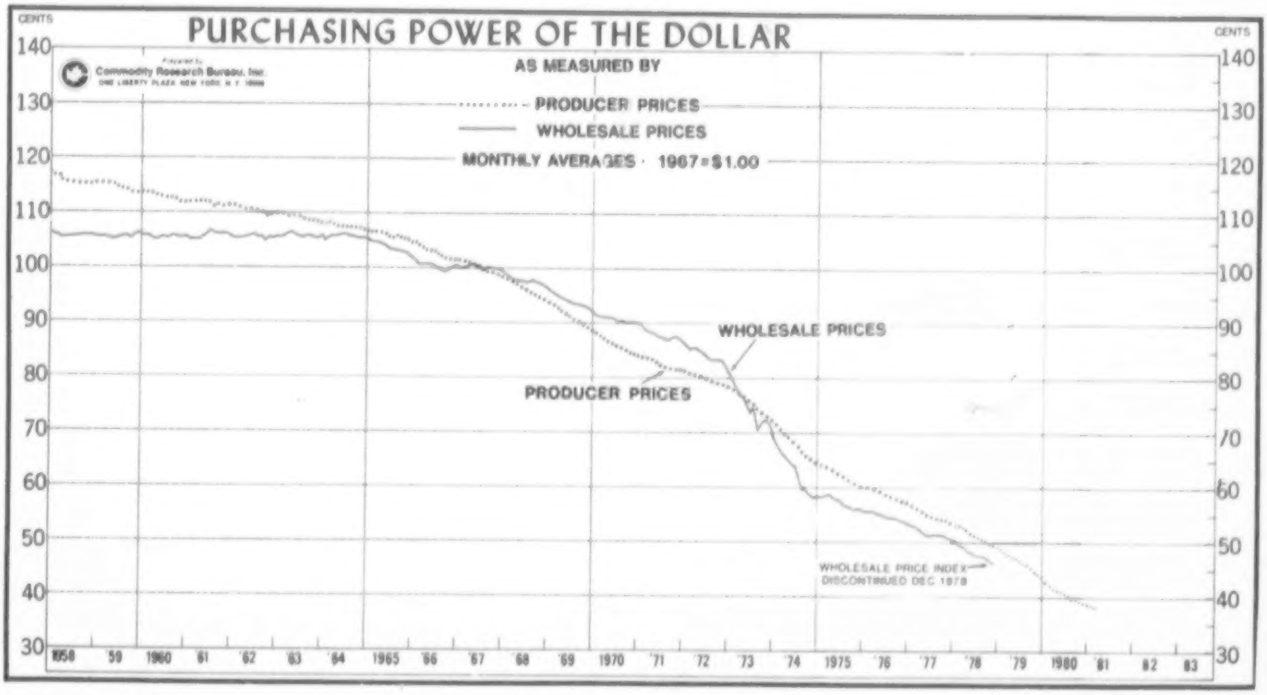
	Gross National Product					National Income					Personal Income				
Year	I	II	III	IV	Annual Total	I	II	III	IV	Annual Total	I	II	III	IV	Annual Total
1975	1,455	1,499	1,564	1,598	1,529	1,157	1,189	1,243	1,272	1,215	1,205	1,238	1,274	1,305	1,255
1976	1,654	1,683	1,716	1,756	1,702	1,323	1,345	1,370	1,402	1,360	1,337	1,364	1,394	1,432	1,382
1977	1,820	1,876	1,931	1,971	1,900	1,457	1,505	1,551	1,590	1,526	1,473	1,509	1,549	1,596	1,532
1978[2]	2,011	2,104	2,160	2,235	2,128	1,621	1,704	1,753	1,820	1,724	1,635	1,689	1,743	1,803	1,717
1979[2]	2,292	2,375	2,444	2,496	2,414	1,869	1,932	1,986	2,031	1,963	1,853	1,906	1,972	2,032	1,944
1980[2]	2,572	2,565	2,637	2,731	2,627	2,089	2,070	2,122	2,205	2,121	2,088	2,115	2,182	2,256	2,160
1981[2]	2,827														

[1] Seasonally adjusted at annual rates. [2] Preliminary. *Source: U.S. Dept. of Commerce*



INTEREST RATES





Iron and Steel

World production of pig iron in 1980 decreased 3.2 percent to 563.2 million short tons from a revised total of 581.7 million tons in 1979, according to preliminary data of the U.S. Bureau of Mines. World production of raw steel in 1980, estimated at 791.6 million tons by the U.S. Bureau of Mines, was about 2.8 percent below the revised total of 813.9 million tons for 1979.

U.S. production of pig iron and raw steel, and shipments of finished steel and ferrous castings, fell sharply in 1980. Preliminary data of the Bureau of Mines indicated that pig iron production dropped 21 percent in 1980 to 69 million tons, and that raw steel production decreased 18 percent to about 111 million tons.

Steel mill product shipments in the U.S. declined 18 percent in 1980 to 82 million tons, and shipments of iron and steel castings declined 22 percent to 13.5 million tons. Low demand from key markets such as the automotive and construction industries accounted for much of the decrease in steel consumption in 1980, although a draw-down in steel user inventories also contributed to reduced shipments. However, not all segments of the steel market followed the pattern of the auto and residential housing sectors. The search for additional energy reserves, especially oil and natural gas, expanded sharply, and shipments of "oil country" tubular goods by the steel industry consequently broke records. Also, the proliferation of oil and gas transmission line projects improved markets for large diameter steel linepipe. For 1981, some improvement in total domestic steel shipments was anticipated. The major contributing factor was expected to be cessation of inventory liquidation experienced in 1980 at all stages of steel production, distribution, and consumption.

End-use distribution of domestic iron and steel consumption in 1980 was estimated as follows: transportation—25 percent; construction—29 percent; machinery—21 percent; oil and gas industries —10 percent; and cans and containers—6 percent. Appliances and equipment, other consumer and military goods accounted for the remaining 9 percent.

Imports for consumption of major iron and steel products decreased 9 percent in 1980 to an estimated 16.8 million tons, and exports rose by 35 percent to 4.6 million tons. Japan and the European Community remained the principal exporters of steel to the United States. Import quotas on specialty steel, which had been in effect since mid-1976, were removed on February 13, 1980.

Domestic raw steel capability utilization reached a low for the year of 51.7 percent for the week ended July 5, 1980. As of the end of June, about one-fourth of the hourly workforce were laid off in the steel industry and about 10,000 clerical workers were on a 32-hour week. Effective August 1, 1980, the United Steelworkers of America and nine major steel companies signed a 3-year contract.

The Department of Commerce, which assumed responsibility for the administration of the trigger price mechanism (TPM) on January 1, 1980 announced that there would be no change in the trigger prices for the second quarter of 1980. In March, after United States Steel Corp. filed dumping charges against steelmakers in seven European countries, the TPM was suspended. It was reinstated in September as part of the administration's plan for the steel industry; dumping charges were then withdrawn. The new trigger prices were about 12 percent above those in the first quarter. Other provisions of the administration's steel plan included an increased depreciation rate for new equipment, liberalization of the investment tax credit, and extension of compliance times for air pollution standards. The steel trigger price mechanism for the first quarter of 1981 was 0.9 percent above fourth quarter 1980 levels. (The trigger mechanism is designed to initiate investigations when foreign steel makers attempt to sell their products in the United States below fair market value.)

U.S. mine production and shipments of iron ore dropped sharply in 1980, primarily reflecting the reduced demand for iron ore by the iron and steel industry. Preliminary U.S. Bureau of Mines data indicated that domestic iron ore production decreased 19 percent in 1980 to 69.3 million long tons, and mine shipments declined 20 percent to 68.6 million tons, compared with 1979 levels. The low demand for iron ore caused most producers to either shut down or operate on reduced schedules for various periods during the year in an effort to lower stockpile inventories.

Imports of iron ore, primarily from Canada, dropped to 25.1 million tons from 33.8 million in 1979, and were the lowest since 1961. Consumption of iron ore fell 22 percent in 1980 to 89.4 million tons from 115.0 million in 1979. Yearend stocks at mines, docks, and consuming plants amounting to 56.1 million tons were less than 1.0 percent larger than at the end of 1979.

Iron and steel scrap is an important raw material both in steelmaking and in foundry production. Apparent production of ferrous scrap in 1980 was estimated by the U.S. Bureau of Mines at 93 million short tons, consisting of 51 million tons of purchased scrap and 42 million tons of home scrap. Domestic consumption of iron and steel scrap in 1980 decreased about 18 percent from the 1979 level to approximately 84 million tons, according to preliminary data of the U.S. Bureau of Mines. Consumer stocks at the end of 1980 were estimated at 8.0 million tons, down 13 percent from stocks a year earlier.

IRON AND STEEL

World Production of Raw Steel (Ingots & Castings) In Millions of Short Tons

Year	Belgium	Brazil	Canada	Czech.	France	W. Germany	Italy	Japan	Luxembourg	China	Poland	Sweden	U.S.S.R.	United Kingdom	United States	World Total
1968	12.8		11.3	11.6	22.5	45.4	18.7	73.7	5.3	16.5		5.6	117.4	29.0	131.5	583.6
1969	14.1		10.3	11.9	24.8	50.0	18.1	90.6	6.1	18.0		5.9	121.6	29.6	141.3	632.6
1970	13.9		12.3	12.7	26.2	49.6	19.0	102.9	6.0	20.0		6.1	127.7	31.2	131.5	655.2
1971	13.7		12.2	13.3	25.2	44.4	19.2	97.6	5.8	23.0		5.8	133.0	26.6	120.4	640.5
1972	16.0		13.1	14.0	26.5	48.2	21.8	106.8	6.0	25.0		5.8	138.4	27.9	133.2	692.7
1973	17.1		14.8	14.5	27.8	54.6	23.1	131.5	6.5	30.0	15.5	6.2	144.9	29.4	150.8	769.1
1974	17.9	8.3	15.0	15.0	29.8	58.7	26.2	129.1	7.1	30.0	16.0	6.6	150.1	24.7	145.7	780.4
1975	12.8	9.2	14.4	15.8	23.7	44.6	24.1	112.8	5.1	28.0	16.5	6.2	155.8	22.3	116.6	710.1
1976	13.4	10.1	14.7	16.2	25.6	46.8	25.8	118.4	5.0	22.0	17.2	5.7	159.6	24.6	128.0	742.1
1977	12.4	12.3	15.0	16.6	24.4	43.0	25.7	112.9	4.8	26.2	19.7	4.4	161.7	22.5	125.3	739.2
1978[1]	13.9	13.3	16.4	16.9	25.2	45.5	26.8	112.6	5.3	35.0	21.2	4.8	166.9	22.4	137.0	783.4
1979[1]	14.8	15.3	17.7	16.3	25.8	50.8	26.7	123.2	5.5	38.0	21.2	5.2	164.2	23.6	136.3	813.9
1980[2]								125.0		38.6			173.0		111.3	791.6
1981																

[1] Preliminary. [2] Estimate. *Source: Bureau of Mines*

Salient Statistics of Steel in the United States In Millions of Short Tons

	Value of		Production									Shipments of Steel Products	
			Steel Ingots and Castings						Alloy Steel[2]				
				Open Hearth									
Year	Exports (Million $)	Imports (Million $)	Basic Oxygen	Acid	Basic	Bessemer	Electric[3]	Total Production	Stainless	Other	Total Production	Domestic Consumption	Export
1968			48.8	[5]	65.8	[5]	16.8	131.5	1.4	12.4	13.8	88.2	2.7
1969			60.2	[5]	60.9	[5]	20.1	141.3	1.6	13.3	14.9	88.1	5.8
1970	1,375	2,139	63.3	[5]	48.0	[5]	20.2	131.5	1.3	11.5	12.8	83.1	7.7
1971	945	2,803	63.9	[5]	35.6	[5]	20.9	120.4	1.3	12.2	13.5	83.5	3.5
1972	1,006	2,992	74.6	[5]	34.9	[5]	23.7	133.2	1.6	14.0	15.6	88.3	3.5
1973	1,581	3,045	83.3	[5]	39.8	[5]	27.8	150.8	1.9	16.2	18.1	106.4	5.0
1974	3,012	5,583	81.6	[5]	35.5	[5]	28.7	145.7	2.2	17.0	19.2	102.5	7.0
1975	2,970	4,507	71.8	[5]	22.2	[5]	22.7	116.6	1.1	15.2	16.3	76.0	4.0
1976	2,462	4,584	79.9	[5]	23.5	[5]	24.6	128.0	1.7	14.3	16.0	86.4	3.0
1977	2,284	5,936	77.4	[5]	20.0	[3]	27.9	125.3	1.9	15.3	17.2	88.0	3.1
1978	2,292	7,658	83.5	[5]	21.3	[3]	32.2	137.0	2.0	18.2	20.2	94.6	3.3
1979[1]	2,817	7,822	83.3	[5]	19.2	[3]	33.9	136.3	2.1	18.0	20.1	98.3	2.0
1980[4]			68.6	[5]	13.1	[5]	30.5	112.1	1.7	15.4	17.1	97.7	2.6
1981													

[1] Preliminary. [2] Included under total steel production. [3] Includes crucible steels. [4] Estimate. [5] No longer published.
Sources: American Iron & Steel Institute; U.S. Bureau of Mines

U.S. Production of Steel Ingots, Rate of Capability Utilization[1] In Percent[2]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1968	111.2	116.7	117.7	119.1	117.5	113.9	106.0	82.9	77.3	83.4	91.7	96.5	103.1
1969	102.6	111.8	114.8	116.1	114.4	113.0	105.2	105.7	110.2	114.1	114.0	109.3	111.0
1970	104.1	107.6	110.0	108.9	107.1	108.3	99.8	99.6	102.6	99.0	95.7	96.6	103.4
1971	104.3	111.4	117.0	120.2	119.6	109.9	92.0	53.4	73.4	76.0	77.0	81.3	94.7
1972	92.6	98.7	107.3	110.8	110.5	105.0	95.7	100.4	104.4	107.9	109.0	109.9	104.5
1973	114.5	119.1	121.1	122.3	121.9	119.4	113.8	112.7	117.0	119.2	120.4	117.7	118.5
1974	117.8	118.8	118.1	119.0	118.0	116.5	112.5	109.6	113.3	116.8	111.1	101.4	114.4
1975	107.2	111.4	No Longer Available										
1976[2]	74.4	80.1	85.4	88.4	90.8	89.7	84.8	82.8	80.4	75.8	72.2	67.8	80.9
1977	66.8	72.1	81.2	83.3	88.1	84.9	76.7	77.2	77.2	77.7	75.0	74.7	78.4
1978	77.2	80.1	83.1	88.5	91.5	91.1	85.1	86.3	88.6	89.8	89.4	87.7	86.8
1979	83.5	87.9	94.5	93.4	94.8	93.7	89.9	86.0	82.8	84.4	80.6	78.0	87.8
1980	82.7	85.3	88.4	83.0	69.6	58.4	53.1	54.8	62.7	72.2	79.5	77.8	72.3
1981													

[1] Based on tonnage capability to produce raw steel for a full order book. [2] Data prior to 1976 are based on INDEX OF PRODUCTION 1967 = 100. *Source: American Iron and Steel Institute*

United States Production of Steel Ingots In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1968	12,015	11,795	12,721	12,450	12,700	11,906	11,452	8,956	8,086	9,006	9,590	10,421	131,462
1969	11,084	10,915	12,400	12,143	12,356	11,810	11,365	11,421	11,523	12,324	11,916	11,812	141,262
1970	11,243	10,498	11,886	11,386	11,574	11,323	10,781	10,765	10,726	10,699	10,008	10,438	131,514
1971	11,274	10,874	12,645	12,565	12,920	11,491	9,942	5,774	7,678	8,211	8,053	8,784	120,443
1972	10,001	9,980	11,588	11,588	11,936	10,980	10,341	10,842	10,913	11,657	11,398	11,878	133,241
1973	12,373	11,626	13,088	12,788	13,174	12,488	12,290	12,182	12,229	12,876	12,586	12,722	150,799
1974	12,726	11,598	12,758	12,442	12,752	12,185	12,155	11,837	11,849	12,617	11,615	10,960	145,720
1975	11,584	10,862	11,980	10,667	9,864	8,744	8,370	8,648	9,295	9,214	8,745	8,846	116,642
1976	9,835	9,907	11,294	11,439	12,136	11,605	11,400	11,128	10,463	10,295	9,494	9,215	128,000
1977[1]	9,089	8,859	11,049	11,167	12,201	11,384	10,319	10,392	10,050	10,442	9,748	10,031	125,333
1978[1]	10,301	9,643	11,083	11,528	12,320	11,861	11,388	11,550	11,467	12,105	11,654	11,812	137,031
1979[1]	11,105	10,562	12,576	12,196	12,789	12,230	11,821	11,309	10,541	10,891	9,997	9,996	136,341
1980[1]	10,701	10,332	11,439	10,658	9,226	7,501	6,796	7,019	7,767	9,442	10,057	10,180	111,118
1981													

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[1] Preliminary. *Source: American Iron and Steel Institute*

Shipments of Steel Products[1] by Market Classifications in the United States In Thousands of Net Tons

Year	Appliances, Utensils & Cutlery	Automotive	Containers	Construction	Contractors Prod.	Electrical Mach. & Equipment	Export	Machinery, Industrial Equip. & Tools	Oil and Gas	Rail Transportation	Steel for Converting & Processing[2]	Steel Service Center & Distributors	All Other[3]	Total Shipments
1968	2,292	19,269	7,902	9,303	4,922	2,897	2,147	5,469	2,892	3,048	2,909	16,099	12,707	91,856
1969	2,248	18,276	7,145	9,178	4,768	2,813	5,004	5,690	2,224	3,344	3,237	17,565	12,385	93,877
1970	2,160	14,475	7,775	9,000	4,440	2,694	5,985	5,169	1,652	3,098	3,443	17,591	13,316	90,798
1971	2,148	17,483	7,212	9,541	4,946	2,593	2,433	4,903	1,760	3,004	3,593	16,184	11,238	87,038
1972	2,362	18,217	6,616	9,299	5,055	2,824	2,555	5,396	278	2,730	4,199	18,598	13,676	91,805
1973	2,747	23,217	7,811	11,405	6,459	3,348	3,138	6,351	409	3,228	4,714	22,705	15,898	111,430
1974	2,412	18,972	8,235	12,440	6,215	3,242	3,961	6,468	521	3,414	4,486	23,206	15,900	109,472
1975	1,653	15,214	4,589	8,767	3,927	2,173	1,755	5,173	601	3,152	3,255	15,622	14,076	79,957
1976	1,961	21,334	6,914	7,406	4,543	2,670	1,838	5,188	2,652	3,027	4,141	14,662	13,111	89,447
1977	2,129	21,490	6,714	7,553	4,500	2,639	1,076	5,566	3,650	3,238	3,679	15,346	13,567	91,147
1978	2,094	21,253	6,595	9,612	3,480	2,811	1,224	5,992	4,140	3,549	4,612	17,333	15,240	97,935
1979	2,141	18,624	6,770	10,058	4,021	2,821	2,010	6,027	3,738	4,127	4,728	18,263	16,934	100,262
1980	1,726	12,156	5,549	12,149	3,362	2,441	2,597	4,566	5,368	3,178	3,881	16,174	10,706	83,853
1981														

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[1] All grades including carbon, alloy & stainless steel. [2] Net total after deducting shipments to reporting companies for conversion or resale. [3] Includes agricultural; bolts, nuts, rivets & screws; forgings (other than automotive); shipbuilding & marine equipment; aircraft; mining, quarrying & lumbering; other domestic & commercial equipment machinery; ordnance & other direct military; & shipments of non-reporting companies. *Source: American Iron and Steel Institute*

Net Shipments of Steel Products in the United States
(All Grades, Including Carbon, Alloy & Stainless Steel) In Thousands of Net Tons

Year	Cold Finished Bars	Rails & Accessories	Wire & Wire Products	Tin Mill Products	Plates	Sheets & Strip	Hot Rolled Bars	Pipe & Tubing	Shapes & Steel Piling	Reinforcing Bars	Hot Rolled Sheets	Cold Rolled Sheets	Semi-Finished	Alloy	Stainless
1968	1,815	1,462	3,393	7,267	8,401	36,624	8,497	10,078	6,149	3,241	10,782	16,336	4,821	7,816	808
1969	1,923	1,514	3,256	6,555	8,238	38,111	8,659	9,232	6,244	3,659	12,471	16,427	6,373	7,861	898
1970	1,490	1,590	2,998	7,243	8,065	35,101	8,107	7,778	6,060	4,891	12,319	14,250	7,387	6,944	709
1971	1,378	1,564	2,791	6,811	7,939	35,574	8,179	7,574	5,666	4,521	11,760	14,898	4,962	7,014	718
1972	1,675	1,601	2,952	6,135	7,553	39,862	9,299	7,609	5,656	4,454	14,036	16,123	4,917	7,777	855
1973	2,161	1,689	3,245	7,316	9,678	49,370	10,763	9,133	7,081	5,135	16,886	20,377	5,749	9,372	1,134
1974	2,251	1,785	3,171	7,528	10,919	44,991	11,061	9,844	7,210	5,089	15,774	18,275	5,509	10,179	1,345
1975	1,486	1,965	2,154	5,587	8,761	30,763	8,146	8,228	5,121	3,666	11,222	12,841	3,911	8,436	757
1976	1,618	2,017	2,461	6,436	7,160	42,303	8,664	6,265	4,187	3,876	15,090	18,265	4,384		
1977	1,792	1,863	2,401	6,382	7,538	41,586	9,251	7,484	4,379	4,234	14,484	17,627	4,055	8,760	1,118
1978	2,084	1,703	2,510	6,100	8,601	43,609	8,758	8,399	5,027	4,704	15,447	17,821	5,070	10,557	1,191
1979	2,245	2,026	2,449	6,310	9,035	43,507	8,493	8,242	5,596	5,303	15,995	17,284	5,496	11,023	1,361
1980[1]	1,585	1,797	1,768	5,709	8,080	33,353	5,961	9,097	5,207	4,683	12,116	13,313	5,342	9,368	1,127
1981															

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[1] Preliminary. *Source: American Iron & Steel Institute*

IRON AND STEEL

U.S. Foreign Trade of Iron & Steel Products In Thousands of Short Tons

Year	U.S. Imports of Iron & Steel Pdts.						Exports of Iron & Steel Pdts. from U.S.				
	Steel Mill Pdts.	Other Steel Pdts.	Iron Pdts. & Ferro-alloys	Grand Total	Mil. $	Iron & Steel Scrap	Steel Mill Pdts.	Other Steel Pdts.	Iron Pdts. & Ferro-alloys	Grand Total	Iron & Steel Scrap
1975	12,012	657	1,250	13,919	5,257	305	2,953	618	575	4,146	9,608
1976	14,285	652	1,357	16,294	5,082	507	2,519	831	607	3,865	8,120
1977	19,307	985	1,366	21,658	6,839	625	1,913	765	639	3,218	6,175
1978	21,135	1,130	1,804	24,068	8,532	794	2,268	619	565	3,499	9,038
1979[1]	17,518	1,150	1,659	20,327	8,897	760	2,603	719	441	3,762	11,054
1980[2]				18,000						4,600	
1981											

[1] Preliminary. [2] Estimate. *Source: U.S. Bureau of Mines; American Metal Market*

Average Wholesale Prices of Iron and Steel in the U.S. In Dollars Per Net Ton

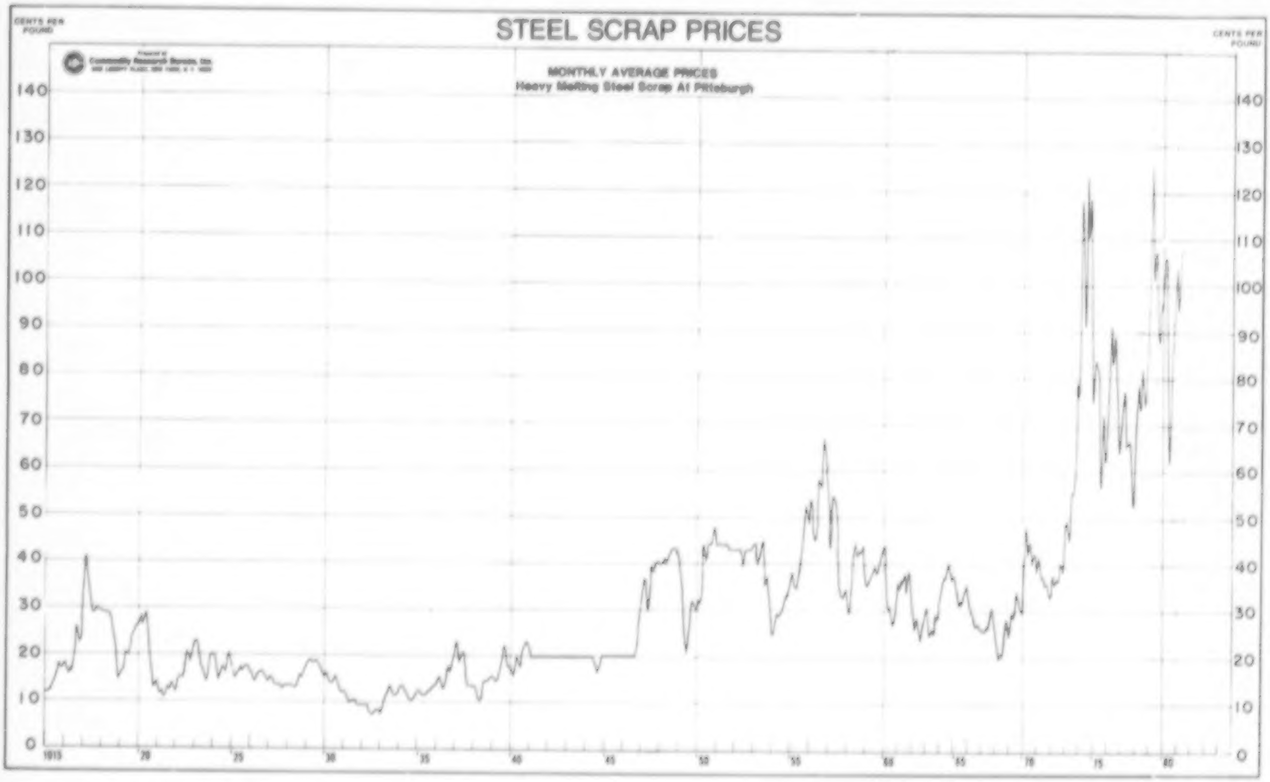
Year	Pig Iron			Steel Billets Pitts.	No. 1 Heavy Melting Steel Scrap		Cents Per Pound at Pittsburgh								
	Bessemer[2] Neville Isl., Pa.	No. 2 Foundry, F.O.B. Chicago	No. 2 F.O.B. Birmingham		Pitts.	Chicago	Tin Plate (¼ Lb.)	Hot Rolled Sheet[3]	Steel Bars Hot Rolled	Steel Bars Cold Finished	Structural Shapes	Carbon Steel Plates	Cold Rolled Strip	Galvanized Sheets	Wire Rods-Chi. $Gr.Ton
1968	64.00	63.50	59.50	89.00	27.21	25.58	9.50	5.71	6.14	8.35	5.98	5.88	8.07	9.63	6.66
1969	65.09	64.59	60.59	97.16	31.61	29.21	7.85	6.58	6.56	8.96	6.36	6.26	8.66	9.91	7.08
1970	70.69	70.19	66.19	103.98	42.18	41.69	9.00	7.27	7.01	9.49	6.84	6.74	9.33	10.92	7.42
1971	77.42	77.42	70.50	115.00	36.71	33.49	9.60	7.76	7.89	10.57	7.55	7.50	9.98	9.40	8.20
1972	82.22	83.23	75.50	125.00	38.42	35.94	9.60	8.36	7.13	11.50	8.10	8.15	10.94	10.53	8.80
1973	79.82	80.08	70.03	126.00	57.61	57.29	10.00	8.40	8.38	12.00	8.50	8.50	10.55	11.03	9.15
1974	124.81	126.16	141.25	166.68	104.61	112.68	11.83	9.98	11.15	13.7[illegible]	9.92	11.60	12.78	12.61	10.42
1975	181.00	179.50	181.00	195.00	72.01	71.35	14.15	11.93	11.43	15.95	12.07	13.16	15.89	15.03	12.93
1976	181.00	179.50	181.00	209.48	78.83	77.49	15.83	12.12	11.32	17.38	12.96	13.41	17.97	16.20	13.31
1977	184.03	184.35	184.33	246.15	66.42	60.21	16.0–19.1	13.75	12.68	20.15	13.85	14.64	20.33	18.05	14.56
1978	190.00	198.30	191.00	282.88	78.48	73.98	18.0–20.4	15.36	14.01	22.80	15.73	16.53	22.49	20.21	16.80
1979[1]	190.00	204.50	191.00	302.00	100.77	96.69	19.1–23.4	17.05	16.20	25.07	17.36	18.46	24.13	22.40	17.22
1980[1]					95.48	86.70									
1981															

[1] Preliminary. [2] Prior to 1974 prices are F.O.B. Mahoning Valley. [3] 10 gauge. *Source: American Metal Market*

World Production of Pig Iron (Excludes Ferro-Alloys) In Millions of Short Tons

Year	Australia	Belgium	Canada	Czech.	France	W. Germany	India	Italy	Japan	Luxembourg	Poland	China	U.S.S.R.	United Kingdom	United States	World Total
1968	6.1	11.4	8.4	7.6	17.7	33.0	7.9		51.1	4.7		20.9	85.3	18.2	88.8	418.1
1969	6.7	12.5	7.5	7.7	19.6	37.0	8.1		64.1	5.4		22.0	88.7	18.4	95.0	453.1
1970	6.8	12.0	9.1	8.3	20.7	36.6	7.8		75.0	5.3		24.3	83.5	19.3	91.3	474.8
1971	6.8	11.5	8.6	8.8	19.7	32.7	7.4		80.2	5.1		30.0	97.3	16.8	81.4	474.0
1972	7.2	13.0	9.4	9.2	20.4	34.9	7.9		81.6	5.1		29.0	101.8	16.7	88.9	500.1
1973	8.4	14.0	10.5	9.4	21.8	40.2	8.3	11.1	99.2	5.6	8.4	31.0	104.7	18.4	101.3	552.4
1974	8.0	14.4	10.4	9.8	24.2	43.9	8.1	12.9	99.7	6.0	8.4	33.0	109.0	15.6	95.5	564.2
1975	8.2	10.0	10.1	10.2	19.3	32.9	9.1	12.5	95.8	4.3	8.4	35.0	112.4	13.3	79.7	528.3
1976	8.2	10.9	10.8	10.4	20.6	34.8	10.8	12.8	95.4	4.1	8.7	24.3	115.1	15.1	86.8	541.2
1977	7.4	9.8	10.6	10.7	19.7	31.6	10.8	12.6	94.7	3.9	10.5	27.6	117.3	13.4	81.5	537.7
1978[1]	8.1	11.2	11.4	11.0	20.0	32.9	10.4	12.5	86.6	4.1	10.6	38.3	120.9	12.6	87.7	558.4
1979[1]	8.6	11.9	12.0	10.6	21.4	38.4	9.7	12.5	92.3	4.2	10.7	40.5	120.0	14.5	87.0	581.7
1980[2]									96.8			4.08	127.0		69.1	563.2
1981																

[1] Preliminary. [2] Estimated. *Source: Bureau of Mines*



Wholesale Price of No. 1 Heavy Melting Steel Scrap at Chicago In Dollars Per Gross Ton

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1968	30.77	30.45	26.88	24.81	23.50	21.48	20.98	20.50	21.40	20.50	23.22	22.50	25.58
1969	25.64	28.39	25.83	24.74	29.50	29.45	28.60	30.95	33.60	30.89	29.62	33.25	29.21
1970	40.50	48.89	45.74	39.68	42.85	43.95	40.84	40.76	45.96	41.19	34.36	35.50	41.69
1971	42.85	43.76	36.89	33.60	34.35	30.89	28.00	28.48	32.45	32.29	29.50	28.76	33.49
1972	31.50	33.58	35.89	34.50	34.50	34.55	35.50	37.50	37.50	37.50	37.50	41.23	35.94
1973	45.00	48.66	45.55	44.17	48.41	51.00	51.00	51.41	56.45	70.36	86.55	88.90	57.28
1974	87.18	114.58	125.64	132.34	100.75	115.25	137.72	119.68	113.90	114.00	107.43	83.67	112.68
1975	79.91	82.61	81.14	83.77	76.14	64.95	54.00	68.41	77.33	64.39	60.08	63.46	71.36
1976	71.67	74.90	85.04	94.96	86.45	86.86	90.67	80.95	68.90	62.00	62.00	65.14	77.46
1977	69.00	69.00	69.65	70.79	64.62	58.36	57.00	57.00	55.00	49.00	43.95	59.26	60.21
1978	71.00	71.00	71.48	76.00	70.32	72.73	76.63	74.48	69.00	69.45	79.35	86.35	73.98
1979	93.00	103.00	121.73	110.10	91.91	106.62	98.62	89.96	86.00	86.22	91.00	91.28	96.69
1980	96.14	99.00	97.00	90.54	69.62	62.24	67.45	77.95	87.24	92.22	97.29	103.68	86.70
1981	95.00	97.11	105.14	107.55									
1982													

Source: American Metal Market

Consumption of Pig Iron in the U.S., by Type of Furnace or Equipment In Thousands of Net Tons

Year	Open Hearth	Bessemer	Electric	Cupola	Air	Basic Oxygen Concentrates	Other Furnaces	Direct Castings	Tot
1972	22,375	[3]	961	2,264	139	60,233	254	[3]	86,2
1973	25,477	[3]	1,379	2,276	57	68,027	402	[3]	97,6
1974	22,507	[3]	1,220	2,123	[3]	66,614	632	3,697	96,7
1975	14,554	[3]	1,019	1,362	[3]	59,210	483	3,010	79,6
1976	15,410	[3]	638	1,197	[3]	66,138	406	3,255	87,0
1977	12,531	[3]	993	1.241	[3]	63,877	354	3,007	82,6
1978	13,444	[3]	1,440	1,056	[3]	69,028	398	3,055	88,4
1979[1]	12,865	[3]	905	1,026	[3]	68,526	397	3,738	87,4
1980[2]									69,4

[1] Preliminary. [2] Estimate. [3] Included in "Other Furnaces." *Source: Bureau of Mines*

U.S. Pig Iron Production (Excluding Production of Ferro-Alloys) In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Tot
1972	6,617	6,598	7,708	7,726	8,012	7,427	7,321	7,385	7,116	7,606	7,475	7,960	88,5
1973	8,199	7,756	8,627	8,490	8,809	8,468	8,516	8,282	8,087	8,588	8,402	8,609	100,8
1974	8,563	7,804	8,386	8,233	8,387	8,185	8,337	7,872	7,713	8,187	7,250	6,731	95,9
1975	7,304	7,135	8,071	7,432	6,990	6,239	5,968	6,031	6,245	6,292	5,981	6,234	79,9
1976	6,636	6,754	7,519	7,601	8,116	7,874	7,999	7,751	6,995	6,969	6,382	6,272	86,8
1977	5,985	5,827	7,174	7,382	7,962	7,530	7,008	6,763	6,566	6,636	6,121	6,419	81,9
1978	6,390	5,971	6,894	7,189	7,936	7,754	7,637	7,518	7,391	7,809	7,533	7,688	87,6
1979	7,064	6,636	7,953	7,726	8,277	8,026	7,505	7,351	6,762	6,779	6,258	6,372	86,9
1980	6,583	6,357	7,115	6,677	5,906	4,664	4,222	4,360	4,596	5,621	6,132	6,489	68,7
1981	6,603												

Source: American Iron and Steel Institute

Salient Statistics of Ferrous Scrap & Pig Iron in the U.S. In Millions of Short Tons

	Consumption: Ferrous Scrap & Pig Iron Charged To												Stocks—Dec. 31 Ferrous Scrap & Pi—Iron at Consumers		
	Mfg. of Pig Iron & Steel Ingots & Castings			Iron Foundries & Misc. Users			Mfg. of Steel Castings (Scrap)	All Uses			Imports of Scrap[2]	Exports of Scrap[3]			
Year	Scrap	Pig Iron	Total	Scrap	Pig Iron	Total		Ferr. Scrap	Pig Iron	Grand Total			Scrap	Pig Iron	To Sto
1971	64.6	76.6	141.2	15.2	1.9	17.1	2.8	82.6	81.2	163.8	.3	6.1	8.5	1.8	10
1972	73.4	84.0	157.2	17.3	2.1	19.4	2.7	93.4	89.1	182.5	.3	7.2	8.2	1.7	9
1973								103.6	99.8	203.4	.3	10.9	7.1	1.2	[illegible]
1974	81.1	92.8	173.9	21.1	3.9	25.0	3.3	105.5	96.8	202.3	.2	8.5	8.4	.8	8
1975	62.8	76.8	139.6	16.3	2.7	10.0	3.2	82.3	79.6	161.9	.3	9.4	8.8	1.4	10
1976	68.4	84.2	152.6	18.6	2.8	21.4	2.9	89.9	87.0	176.9	.5	7.9	10.0	1.5	11
1977	69.3	79.4	148.3	20.0	2.6	22.6	2.9	92.2	82.0	174.2	.6	5.9	9.2	1.3	10
1978	76.3	85.7	162.0	19.9	2.7	22.6	3.0	99.2	88.4	187.6	.8	9.0	8.3	.9	9
1979[1]	77.2	84.7	161.9	18.5	2.7	21.2	3.2	98.9	87.5	186.4	.8	11.1	8.7	.9	9
1980[4]								83.0	69.4	152.4	.6	11.3	8.0	.8	8

[1] Preliminary. [2] Including tinplate scrap. [3] Excluding tinplate circles, strips, cobbles, etc. [4] Estimate. *Source: Bureau Mines*

Basic Pig Iron Prices at Valley Furnaces (F.O.B. Producing Point) In Dollars Per Short[1] Ton

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aver
1971	73.33	73.33	73.33	73.33	73.33	73.33	78.35	78.33	78.33	78.33	78.33	78.33	75.
1972	78.33	78.33	78.33	78.33	80.88	80.88	80.88	80.88	80.88	80.88	80.88	80.88	79.
1973	71.99	71.99	75.89	75.89	75.89	75.89	75.89	75.89	75.89	75.89	75.89	75.89	75.
1974	75.89	77.44	82.81	96.00	96.00	133.80	133.80	149.88	149.88	150.63	155.75	169.40	122.
1975	179.88	179.88	179.88	182.38	182.38	182.38	182.38	182.38	182.38	182.38	182.38	182.38	181.
1976	182.38	182.38	182.38	182.38	182.38	182.25	—	—	—	—	182.25	182.25	182.
1977	182.25	182.25	—	178.00	178.00	178.00	178.00	178.00	191.00	191.00	191.00	191.00	183.
1978	191.00	191.00	191.00	191.00	191.00	191.00	191.00	203.00	203.00	203.00	203.00	203.00	196.
1979	203.00	203.00	203.00	203.00	203.00	203.00	203.00	202.50	202.50	202.50	202.50	202.50	203.
1980	203.00	203.00	203.00	203.00	203.00	203.00	203.00	203.00	203.00	203.00	203.00	203.00	203

[1] Prior to May '73, prices are for long ton. *Sources: American Metal Market; Bureau of Labor Statistics*

World Production of Iron Ore[3], by Specified Countries (Gross Weight) In Millions of Long Tons

Year	Australia	Austria	Brazil	Canada	Chile	China	France	W. Germany	India	Liberia	Spain	Sweden	United Kingdom	United States	U.S.S.R.[1]	Venezuela	World Total[1]
1972	62.8	4.1	41.4	39.7	8.5	59.0	53.4	4.7	34.9	22.2	6.6	32.6	8.9	75.4	204.8	18.2	766.2
1973	83.5	4.1	49.7	49.4	9.3	55.0	53.4	5.0	35.0	23.2	6.5	34.2	7.0	87.7	212.7	22.7	832.3
1974	95.4	4.2	74.3	49.2	10.1	60.0	53.4	4.4	34.9	23.4	8.1	35.6	3.5	84.4	221.3	26.0	883.8
1975	96.1	3.8	88.5	46.1	10.8	64.0	48.9	3.2	40.8	24.0	7.5	30.4	4.4	78.9	229.1	24.4	888.2
1976	91.8	3.7	92.6	56.0	9.9	44.3	44.5	2.2	42.8	18.5	8.1	29.4	4.5	80.0	235.3	18.4	868.8
1977	94.4	3.4	80.7	54.5	7.8	49.2	36.1	2.5	41.6	17.9	8.2	24.4	3.7	55.8	235.9	13.5	827.3
1978	81.8	2.7	83.6	42.9	9.5	68.9	32.9	1.6	37.6	18.5	8.8	21.1	4.2	81.6	240.4	13.4	841.0
1979[2]	87.6	3.2	86.0	60.3		73.8	31.2	1.6	45.0	20.0	9.1	26.2	4.2	85.7	238.2	16.0	886.8
1980[1]	80.0		86.0	50.0			28.0		41.0	18.0		24.0		69.0	240.0	14.0	828.0

[1] Estimate. [2] Preliminary. [3] Iron ore, iron ore concentrates and iron ore agglomerates. *Source: Bureau of Mines*

Salient Statistics of Iron Ore[2] in the U.S. In Millions of Long Tons

Year	Net Import Reliance as a % of Apparent Consumption	Production[3]					Shipments[4]	Value Mill. $ (at Mine)	Avg. Value $ at Mine Per Ton	Stocks—Dec. 31			Imports	Exports	Consumption	Manganiferous Shipments[5]
		Total[3]	Lake Superior	Northeast	Southeast	West				Mines	Consuming Plants	Lake Erie Docks				
1972		75.4	62.0	2.5	.4	10.2	77.9	950.4	12.20	14.7	50.1	2.6	35.8	2.1	126.9	.1
1973		87.7	72.4	2.6	.3	12.0	90.7	1,163.7	12.84	10.9	46.0	3.1	43.3	2.7	146.9	.2
1974		84.4	70.7	2.4	.3	10.5	85.0	1,388.4	16.34	9.4	45.2	3.3	48.0	2.3	138.2	.2
1975	30	78.9	66.7	1.9	.1	9.6	75.7	1,620.6	21.41	12.3	52.2	4.6	46.7	2.5	114.1	.1
1976	31	80.0	67.4	2.0	.1	9.7	77.1	1,871.1	24.28	14.0	56.2	4.8	44.4	2.9	125.4	.2
1977	48	55.8	44.1	1.2	.1	9.3	54.1	1,422.7	26.32	14.8	42.3	3.0	37.9	2.1	116.0	.2
1978	29	81.6	72.7	———8.9———			83.2	2,401.4	28.86	12.4	39.3	3.6	33.6	4.2	124.8	.3
1979[1]	25	85.7	77.2	———8.6———			86.2	2,814.4	32.64	11.3	39.0	5.4	33.8	5.1	125.4	.2
1980[6]	22	69.3	62.2	———7.2———			68.6			14.3	35.7	6.1	25.1	5.3	100.0	

[1] Preliminary. [2] Usable; less than 5% Mn. [3] Includes by-product ore. [4] Excludes by-product ore. [5] Iron ore; 5 to 35% Mn. [6] Estimate. *Source: Bureau of Mines*

U.S. Imports (for Consumption) of Iron Ore from Principal Countries

In Thousands of Long Tons (2240 Pounds)

Year	India	Venezuela	Australia	Brazil	Canada	Chile	South Africa	U.S.S.R.	Liberia	Sweden	Peru	Norway	Total
1972	—	10,926	687	1,114	18,168	308	—	—	2,761	273	1,318	—	35,761
1973	—	13,148	464	3,183	21,628	205	—	—	2,734	273	1,501	—	43,296
1974	—	15,378	638	6,572	19,702	296	1	126	2,730	335	1,810	—	48,029
1975	164	13,137	803	7,526	19,111	931	128	265	2,496	182	1,551	53	46,743
1976	130	9,001	617	5,388	24,962	608	162	44	2,153	441	716	151	44,390
1977	—	6,179	305	2,243	25,283	566	249	86	1,792	153	1,020	—	37,905
1978	—	6,083	264	3,979	19,236	390	94	—	2,170	256	818	302	33,616
1979[1]	54	4,563	183	3,095	22,602	245	106	—	2,190	171	456	44	33,776
1980[2]	—	3,602	—	1,995	17,311	322	6	—	1,590	33	193	—	25,058

[1] Preliminary. [2] Estimate. *Source: Department of Commerce*

Total[1] Iron Ore Stocks at End of Month in the U.S. In Millions of Long Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1972	75.8	72.7	68.7	64.9	65.1	66.3	66.7	67.7	69.7	70.2	69.1	67.0
1973	63.2	59.6	55.3	52.4	53.5	55.3	57.0	58.5	60.3	61.6	60.7	59.5
1974	54.9	50.9	47.2	44.2	46.4	47.5	50.0	51.5	53.6	55.7	56.6	57.7
1975	56.6	54.9	52.9	52.3	55.8	57.6	61.2	63.9	66.1	66.6	67.3	68.1
1976[2]	66.9	65.4	63.1	61.4	62.6	64.1	65.3	66.6	69.3	71.4	73.2	75.0
1977[2]	73.5	72.2	70.1	68.5	67.7	68.5	69.7	67.2	65.9	63.5	60.7	59.4
1978[2]	56.3	54.1	53.1	50.4	49.9	51.9	51.6	53.8	54.7	55.5	56.4	55.3
1979[2]	53.0	50.7	47.8	46.7	46.6	48.0	51.0	51.5	52.0	54.2	55.2	55.8
1980[2]	53.7	51.8	49.0	49.6	50.7	53.5	56.8	57.5	58.0	57.7	56.6	56.1

[1] All stocks at mines, furnace yards and at U.S. docks. [2] Preliminary. *Source: American Iron Ore Association*

Lard

Lard production in the United States in the 1980/81 season (ending September 30, 1981) was estimated by the USDA at 1.2 billion pounds, approximately 0.8 percent below last season's output. The decrease in production was expected mainly because of expected lower hog slaughter in 1981. Relatively high corn prices contributed to lowered output of lard per hog.

Domestic disappearance of lard was expected to drop below 1.0 billion pounds in 1980/81, down from 1.1 billion pounds last marketing year. Direct use of lard was expected to stay at about the same level as last season. Lard use in shortening and margarine manufacture was expected to stay at about the same level as recent years, 150 million pounds. The United Kingdom and South America are major export markets for U.S. lard.

Early in 1981, the Foreign Agricultural Service (FAS) of the USDA projected 1980/81 world lard production of 3.96 million tonnes, down from 4.01 million estimated for 1979/80. The FAS also estimated 1980/81 world production of fats and oils at 56.71 million tonnes versus 58.15 million projected for 1979/80.

According to the USDA, United States lard prices (loose, tanks, Chicago) in 1980/81 were expected to average above last season's 20 cents per pound and increase as the season progressed due to lower hog slaughter and strengthening of prices of other edible fats and oils.

Supply and Distribution of Lard in the United States In Millions of Pounds

	Supply							Distribution							
	Production									Domestic Disappearance					
	Commercial												Direct Use as Lard		
Year	Federally Inspected	Other	Total	Farm	Total Production	Stocks Jan. 1[2]	Total Supply	Exports[3]	Shipments to U.S. Territories	Total	Shortening	Margarine	Civilian	Military	Civilian Per Capita Lbs.
1971	1,830	106	1,936	24	1,960	82	2,042	282	62	1,598	520	159	880	1	4.3
1972	1,464	76	1,541	18	1,550	100	1,658	164	25	1,418	441	128	787	1	3.8
1973	1,181	55	1,235	18	1,254	61	1,305	113	8	1,140	341	72	705	1	3.4
1974	1,286	58	1,344	22	1,366	44	1,410	161	21	1,192	317	160	681	1	3.2
1975	956	39	995	17	1,012	36	1,048	88	56	876	165	45	615	1	3.0
1976	1,010	33	1,043	17	1,060	28	1,088	181	54	819	156	37	568	1	2.7
1977	1,022	[5]	1,022	16	1,038	34	1,072	182	47	814	185	73	495	1	2.3
1978	991	[5]	991	15	1,006	29	1,035	120	42	835	209	68	482	1	2.2
1979[1]	1,141	[5]	1,141	15	1,156	38	1,194	96	20	1,028	316	76	564	1	2.6
1980[4]			1,173		1,173	50	1,223								
1981[4]						49									

[1] Preliminary. [2] Factory & warehouse. [3] Includes military shipments for civilian relief abroad. Also non-food products; the bulk goes into shortening. [4] Estimate. [5] Included in FARM. *Source: Economic Research Service, U.S.D.A.*

Domestic Disappearance of Lard in the United States In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1971	152.1	102.6	157.5	132.3	104.3	130.9	135.9	141.5	140.7	117.6	123.3	135.2	1,574
1972	134.0	100.4	138.3	113.3	119.8	125.2	113.2	132.2	106.7	116.0	90.7	110.8	1,400
1973	96.4	98.3	100.9	89.4	111.7	101.8	88.5	80.4	83.7	90.3	94.3	86.2	1,122
1974	89.9	84.5	87.4	100.7	107.6	89.4	81.8	115.0	97.8	124.1	102.9	89.2	1,170
1975	98.9	61.3	90.4	81.0	78.6	59.1	65.5	65.7	55.3	68.5	69.1	65.5	859
1976	67.6	47.4	86.2	53.0	67.7	53.6	67.8	74.6	65.0	79.3	76.1	64.8	803
1977	50.5	55.0	73.3	48.3	77.0	66.9	64.3	80.8	73.0	60.1	82.7	66.4	798
1978[1]	68.3	62.3	65.6	71.9	74.8	60.3	67.7	72.2	68.3	77.5	75.2	64.4	825
1979[1]	70.1	62.1	76.0	78.8	84.3	88.3	78.9	97.6	88.6	103.2	94.7	86.0	1,009
1980[1]	90.4	82.0	39.1	43.0	48.2	42.8	41.8	42.0	40.5	45.[illegible]	47.0	46.9	609
1981[1]	45.5												

[1] Preliminary. *Source: Economic Research Service, U.S.D.A.*

Average Wholesale Price of Lard—Loose, Tank Cars, Chicago In Cents Per Pound

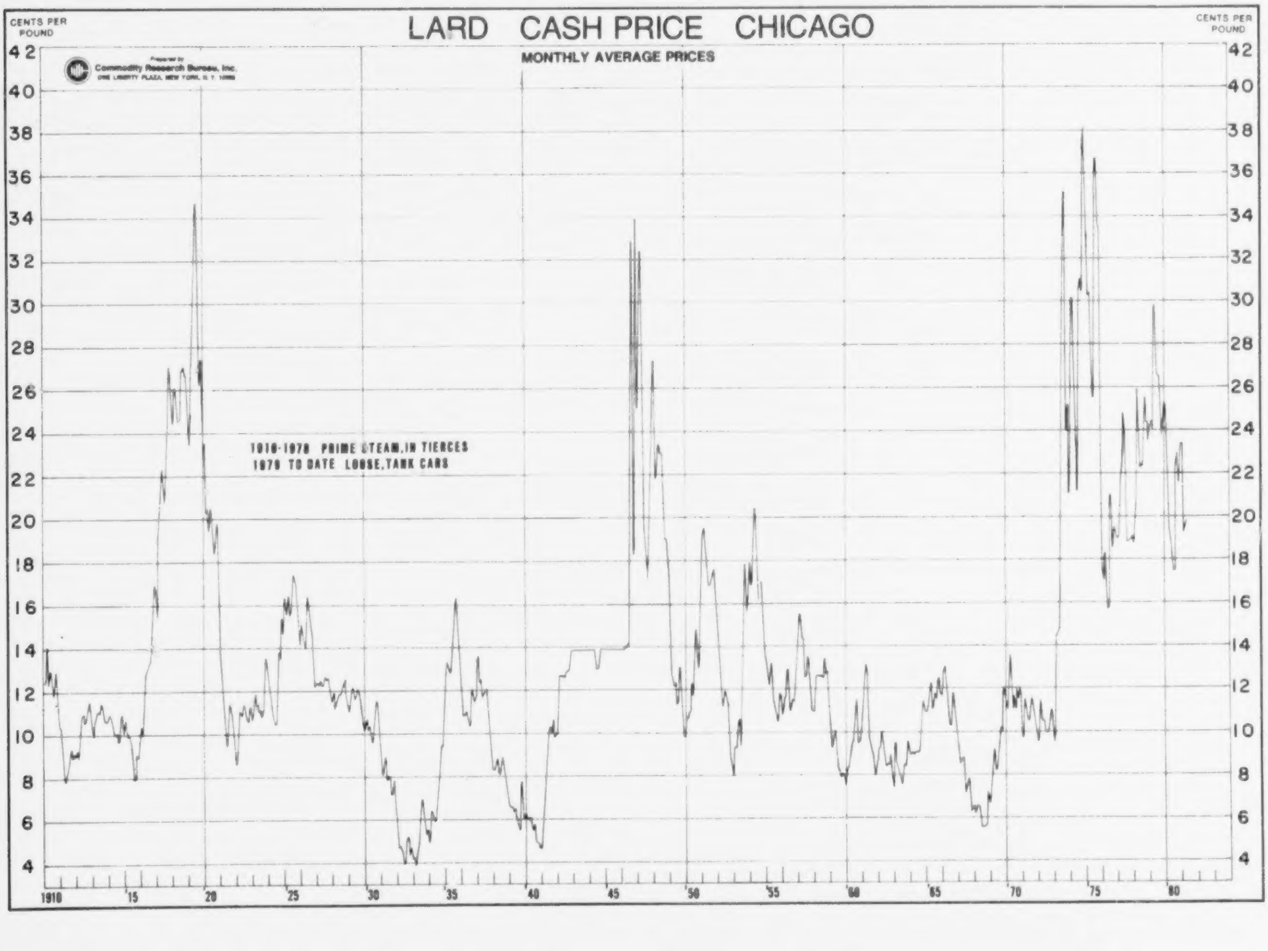
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1975	37.0	30.0	28.0	28.5	28.5	24.0	38.0	36.0	37.5	35.0	30.0	18.5	30.9
1976	17.0	17.4	17.0	15.8	15.6	16.0	19.0	19.3	21.0	17.8	19.0	19.1	17.8
1977	20.5	22.4	21.5	25.0	26.0	23.1	20.5	19.0	17.9	21.5	19.0	19.3	21.3
1978	19.4	20.8	23.8	25.6	22.0	22.5	23.3	22.3	26.0	24.5	24.5	23.3	23.2
1979	24.5	24.0	25.1	29.8	26.8	—	—	—	26.6	25.1	23.8	25.1	25.6
1980	22.0	21.6	19.3	19.0	18.0	17.5	17.5	22.5	23.0	21.6	23.3	23.3	20.7

Source: Economic Research Service, U.S.D.A.

United States Cold Storage Holdings of all Lard[1], on First of Month In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1968	151.4	170.2	123.9	121.3	132.0	138.8	129.7	121.1	105.2	94.1	89.1	78.2
1969	94.0	91.7	96.7	92.3	93.2	80.3	75.5	62.1	55.0	55.8	58.3	47.7
1970	70.1	64.8	61.6	67.1	75.2	65.3	64.9	66.5	54.2	59.8	59.0	74.0
1971	82.5	90.7	85.8	80.9	79.8	90.9	101.1	89.1	81.6	76.9	82.7	82.4
1972	99.9	78.1	66.1	64.3	80.7	89.6	83.2	64.1	52.3	44.0	44.0	57.5
1973	51.2	52.1	44.5	49.3	49.1	49.9	39.9	33.8	32.2	28.4	35.1	37.3
1974	43.7	56.3	45.4	53.3	55.7	55.2	50.0	54.5	50.7	47.7	37.7	33.2
1975	35.7	34.0	34.4	26.4	31.3	31.9	23.6	21.6	19.2	22.6	18.7	25.0
1976	28.3	33.5	36.1	29.3	31.9	32.0	32.2	26.9	28.4	33.6	37.5	37.4
1977	33.9	31.5	37.6	38.4	50.2	50.1	47.2	47.4	38.2	31.7	32.1	32.1
1978	28.5	30.0	29.7	33.9	35.7	35.4	36.8	32.4	29.7	35.1	29.5	32.0
1979[2]	38.1	40.5	39.6	35.8	42.8	47.9	46.0	51.4	46.4	43.9	44.7	52.0
1980[2]	49.9	35.4	42.2	62.5	57.9	51.7	59.4	57.1	55.0	47.3	48.0	48.7
1981[2]	49.4	50.4	46.3									

[1] Stocks in factories & warehouses (except that in hands of retailers). [2] Preliminary. *Source: Bureau of the Census*



LARD

Lard Exports[2] of the United States by Selected Country of Destination In Thousands of Metric Tons[3]

Year	Asia	Belgium & Lux.	Canada	Belize	Bolivia	Neth. Antilles	Colombia	W. Germany	Haiti	Mexico	Ecuador	Netherlands	Poland	United Kingdom	Yugoslavia	Grand Total
1969	—	—	19.9	—		—	—	.9	3.4	35.2	—	—	—	186.5	—	261.9
1970	—	—	16.1	—		—	—	.8	1.2	44.5	—	—	—	259.3	14.3	365.9
1971	—	—	9.2	—		—	—	1.0	1.4	26.0	—	—	—	229.7	5.3	282.3
1972	—	—	11.8	—		—	—	1.2	3.2	26.3	—	—	—	116.1	—	164.4
1973	—	—	6.5	2.9		.5	.1	1.1	2.4	41.5	—	—	—	58.0	—	113.3
1974	—	2.0	20.1	1.9		.3	4.8	—	2.4	51.4	—	—	—	75.6	—	161.4
1975[3]	—	—	9.3	.9		.1	.1	—	.3	24.4	—	—	—	4.6	—	39.8
1976	4.3	4.1	17.0	1.4		.1	16.0	—	1.3	29.1	4.3	8.4	—	29.7	—	117.3
1977	.3	1.7	20.1	1.3	.3	.2	.1	—	1.2	31.1	25.4	12.2	3.4	19.3	—	82.6
1978	.4	—	19.4	1.4	—	.3	.2	—	.9	26.7	15.5	4.9	—	3.8	—	54.2
1979[1]	.3	—	9.3	1.7	1.1	.4	.1	—	1.1	26.7	—	—	—	1.7	—	43.5
1980																

[1] Preliminary. [2] Excludes exports for civilian relief & shipments by CARE. [3] Data prior to 1975 are in MILLIONS OF POUNDS. *Source: Foreign Agricultural Service, U.S.D.A.*

U.S. Exports of Lard & Other Rendered Pork Fat[1] In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1968	7.1	30	13.3	16.1	8	11.8	10.4	15.9	16.3	14.4	19.5	12.0	175
1969	11.7	14.1	29.1	10.7	39.5	15.4	11.1	23.5	21.7	30.0	41.6	13.2	262
1970	24.5	38.1	37.3	12.9	29.9	18.5	38.0	37.2	27.9	37.3	22.4	41.8	366
1971	8.9	40.5	44.4	39.3	30.9	18.1	10.6	15.8	19.6	12.2	38.2	3.9	282
1972	18.6	18.0	14.7	8.5	11.6	12.6	12.7	5.4	14.5	11.8	31.7	4.4	164
1973	18.5	4.9	7.2	10.7	5.3	17.2	4.1	7.1	3.4	13.5	15.5	5.8	113
1974	9.4	13.8	11.3	8.4	21.4	28.5	17.5	5.5	10.5	13.5	9.5	12.1	161
1975	5.4	11.6	7.0	9.4	5.6	8.8	4.3	3.3	7.2	8.4	7.2	9.4	88
1976	14.0	11.8	10.3	15.8	11.7	15.2	11.1	10.5	9.1	15.8	26.7	29.0	181
1977	—	—	20.9	18.4	10.8	15.3	8.6	13.4	23.4	27.5	18.2	20.2	182
1978	6.7	11.1	8.3	8.6	12.9	16.7	10.1	12.9	10.3	16.7	16.3	9.7	140
1979	7.5	12.0	12.0	6.8	12.8	8.3	8.1	7.1	5.9	13.0	10.5	11.0	115
1980	9.1	6.1											

[1] Except grease. *Source: U.S. Department of Commerce*

United States Production of Lard[1] (Commercial Production[2]) In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1968	157.0	135.8	147.6	163.9	172.5	139.6	140.3	146.5	153.7	182.0	163.6	160.0	1,862
1969	160.0	137.6	149.1	152.5	141.7	134.8	140.9	130.9	154.1	166.8	141.6	144.7	1,755
1970	144.1	120.7	139.4	153.0	130.0	136.5	131.5	135.4	157.6	175.5	174.2	178.1	1,776
1971	166.1	129.2	193.4	162.4	146.0	157.8	133.7	141.9	148.1	139.6	158.9	152.7	1,830
1972	123.2	105.0	148.9	131.5	138.7	130.8	101.6	120.8	108.0	122.7	130.3	103.1	1,464
1973	110.6	91.8	108.7	95.4	122.5	105.3	82.8	81.9	80.1	106.1	108.1	94.9	1,181
1974[2]	89.9	84.5	87.4	100.7	107.6	89.4	81.8	115.0	97.8	124.1	102.9	89.2	1,170
1975	103.0	87.0	94.0	96.0	86.0	74.0	68.0	67.0	75.0	78.0	83.0	84.0	995
1976	87.0	67.0	90.0	85.0	80.0	76.0	74.0	87.0	91.0	103.0	108.0	95.0	1,043
1977	73.0	65.0	100.0	85.0	85.0	85.0	73.0	86.0	89.0	93.0	102.0	85.0	1,021
1978	83.0	75.0	83.0	80.0	85.0	85.0	73.0	81.0	82.0	88.0	85.0	91.0	1,002
1979	83.0	70.0	84.0	92.0	102.0	94.0	92.0	99.0	92.0	117.0	112.0	92.0	1,120
1980[3]	104.0	95.0	98.0	113.0	110.0	99.0	95.0	86.0	99.0	86.0	96.0	102.0	1,173
1981[3]	101.0	102.0											

[1] Includes "Rendered Pork Fat." [2] Data prior to 1974 are for FEDERAL INSPECTED ONLY. [3] Preliminary.
Source: Department of Agriculture

Lead

U.S. mine production of recoverable lead totaled 550,952 tonnes in 1980, up 4.8 percent from the 1979 level, according to preliminary Bureau of Mines data. The higher production in 1980 reflected the absence of strikes and the beginning of increased production at the Milliken mine in Missouri. Refinery production of soft lead in 1980 amounted to 549,703 tonnes, 5 percent below the 1979 level. Secondary metal production from all recycled materials dropped sharply from output in 1979, partly because of a lack of scrap for secondary production at midyear.

U.S. consumption of lead (reported and estimated) in 1980 totaled about 1.05 million tonnes, 23 percent below the 1979 consumption level, mainly because of further declines in the use of lead as a gasoline additive and low demand for original equipment batteries in the automotive industry. Lead consumption in battery grids and oxides in 1980 dropped some 142,000 tonnes below the comparable 1979 total. Mild fall and winter climate conditions also affected replacement battery shipments. Transportation accounted for the major end use of lead in 1980, with about 60 percent used in batteries and 15 percent in gasoline additives. Construction, paints, ammunition, and electrical use consumed about 20 percent of the total, with the balance accounted for by ceramics, glass, type metal, and other small uses.

Imports of lead into the U.S. in 1980 were 45 percent smaller than in the previous year. The continuing downtrend in imported lead materials was attributed to the growing self-sufficiency of domestic mines and smelters. Exports of lead materials excluding scrap exceeded imports in 1980, totaling some 192,000 tonnes, compared with 43,548 tonnes in 1979. The large increase in exports was stimulated by the narrow differential between the London Metal Exchange (LME) and U.S. producer price for lead which prevailed early in the year.

Combined total stocks of metal held by primary refineries, and secondary smelters and consumers on December 31, 1980 were about 25 percent smaller than a year earlier and represented about 1.7 months supply at the estimated rate of consumption.

On December 13, 1980 both houses of Congress passed "The Lead Duty Suspension Bill," which reduces the tariff on refined lead from the prevailing 3.5 percent, to 3 percent ad valorem, with a floor level of 1.0625 cents per pound. The new tariff is retroactive to January 1, 1980 and will be in effect until June 30, 1983, when the tariff is to revert to the Tokyo agreement terms.

The U.S. producer price for lead declined from 49 to 50 cents per pound at the start of 1980 to 39 cents in December. LME prices paralleled the U.S. price, dropping from 50 cents in January to about 33 cents per pound in December 1980.

World Smelter (Primary & Secondary) Production of Lead[5] In Thousands of Metric[6] Tons

Year	Australia[3]	Belgium[4]	Bulgaria	Canada[3]	China[2]	France	W. Germany	Japan	Mexico[3]	Peru[3]	Spain	United States	U.S.S.R.	Yugoslavia[3]	World Total[5]
1969	378.2	107.1	104.8	187.1	110.0	119.0	138.7	205.7	186.3	85.5	86.4	638.7	485.0	117.9	3,553
1970	388.6	98.5	108.7	204.6	110.0	132.2	124.3	230.4	165.6	79.3	83.3	666.7	485.0	107.4	3,628
1971	356.7	87.4	112.7	185.6	110.0	117.2	108.5	237.1	167.0	74.0	112.5	650.0	500.0	109.3	3,591
1972	383.7	102.3	112.4	206.0	110.0	150.1	112.4	246.1	171.8	94.3	111.1	688.6	510.0	96.4	3,745
1973	374.8	125.3	118.0	206.0	110.0	183.6	94.6	251.4	190.6	91.8	96.3	674.5	520.0	124.2	3,838
1974	371.4	109.8	124.0	139.4	110.0	174.8	128.0	251.3	220.7	88.8	87.7	673.0	525.0	125.5	3,829
1975	343.2	113.5	121.0	189.1	110.0	149.2	101.7	214.1	190.6	78.4	81.5	636.1	530.0	139.0	3,633
1976[6]	372.2	121.5	112.0	231.0	110.0	188.7	278.3	219.1	234.7	74.1	100.3	1,251.0	600.0	140.4	5,043
1977	374.4	122.8	120.0	240.6	110.0	202.2	309.6	321.4	216.2	79.4	113.3	1,306.0	610.0	145.0	5,340
1978[1]	391.1	125.0	120.0	254.1	150.0	208.2	305.0	228.4	215.4	74.3	123.8	1,334.0	620.0	140.0	5,342
1979[2]	415.2	116.1	120.0	242.1	150.0	221.7	341.5	221.3	209.0	85.7	130.0	1,377.0	625.0	130.0	5,472
1980[2]	420.0			250.0					212.0	86.0		1,400.0		128.0	5,400

[1] Preliminary. [2] Estimated. [3] Refined & bullion. [4] Includes scrap. [5] Prior to 1976 data does not include secondary production. [6] Data prior to 1976 are in THOUSANDS OF SHORT TONS. *Source: Bureau of Mines*

U.S. Mine Production of Recoverable Lead In Thousands of Metric[3] Tons

Year	Arizona	California	Colorado	Idaho	Illinois	New York	Missouri	Montana	Nevada	New Mexico	Oklahoma	Utah	Virginia	Washington	Wisconsin	Total U.S.[2]
1969	.2	2.5	21.8	65.6	.8	1.7	355.5	1.8	1.4	2.4	.6	41.3	3.4	8.6	1.1	509.0
1970	.3	1.8	21.9	61.2	1.5	1.3	421.8	1.0	.4	3.6	.8	45.4	3.4	6.8	.8	571.8
1971	.9	2.3	25.7	66.6	1.2	.9	429.6	.6	.1	3.0	—	38.3	3.4	5.2	.8	578.6
1972	1.8	1.2	31.3	61.4	1.3	1.1	489.4	.3	—	3.6	—	20.7	3.4	2.6	.8	618.9
1973	.8	—	27.8	61.4	.5	2.6	484.9	.2	—	2.6	—	13.9	2.6	2.2	.8	603.0
1974	1.1	—	24.6	51.7	.5	3.1	562.1	.2	1.8	2.4	N.A.	10.5	3.1	1.3	1.3	663.9
1975[3]	.4	.1	24.6	45.7	N.A.	2.7	468.1	.2	2.7	1.8	—	11.5	2.3	N.A.	N.A.	563.8
1976	.3	.1	24.3	48.7	N.A.	2.9	454.5	.1	.5	N.A.	N.A.	14.8	1.8	N.A.	N.A.	553.0
1977	.3	—	20.9	42.9	N.A.	2.5	453.8	.1	.7	N.A.	N.A.	9.7	2.0	1.1	N.A.	537.5
1978	.4	N.A.	15.2	44.8	N.A.	1.0	461.8	.1	.7	N.A.	—	2.5	1.8	N.A.	N.A.	529.7
1979	.4	N.A.	7.6	42.6	N.A.	.5	472.1	.3	—	N.A.	—	N.A.	1.6	—	N.A.	525.6
1980[1]	.3		9.5	39.9			497.9	.3	—							551.0

[1] Preliminary. [2] Includes Alaska. [3] Data prior to 1975 are in THOUSANDS OF SHORT TONS. *Source: Bureau of Mines*

Salient Statistics of Lead in the United States in Thousands of Metric[5] Tons

Year	Net Import Reliance as a % of Apparent Consumption	Production of Refined Lead From: Domestic Ores[2]	Foreign Ores[2]	Total Primary	Secondary Sources	Total	Total Value of Refined Mil. $	Secondary Lead Recovered: As Refined Metal	In Antimonial Lead	In Other Alloys	Total	Total Value of Secondary Mil. $	Dec. 31 Stocks: Producers' Stocks[3]	Consumers' Stocks	Avg. Price (¢ per Lb.): New York	London
1973		567.3	107.3	674.5	—	674.5	219.8	186.1	375.8	92.4	654.3	213.2	89.8	124.1	16.29	19.47
1974		580.1	92.9	673.0	—	673.0	303.3	238.2	371.5	89.0	698.7	314.8	121.1	166.6	22.53	26.83
1975[5]	11	481.0	96.1	577.1	—	577.1	273.9	246.1	285.9	65.4	597.3	283.5	142.0	120.9	21.53	18.73
1976	15	515.8	76.5	592.3	—	592.3	301.6	282.1	310.2	66.8	659.1	335.7	110.4	117.6	23.10	20.46
1977	13	486.7	62.0	548.7	.1	548.8	371.4	303.1	383.4	71.1	757.6	512.8	91.1	121.4	30.70	28.00
1978	9	501.6	63.5	565.2	1.2	566.4	419.3	282.6	409.9	76.5	76.92	570.7	98.7	125.2	33.65	29.86
1979[1]	4	530.0	45.6	575.6	2.9	578.5	667.4	352.2	378.8	70.3	801.4	930.0	89.3	153.2	52.64	54.52
1980[4]				550.5		549.7					655.0			95.8	42.46	41.21

[1] Preliminary. [2] And base bullion. [3] At primary smelters & refineries. [4] Estimates. [5] Data prior to 1975 are in THOUSANDS OF SHORT TONS. *Source: Bureau of Mines*

Consumption of Lead in the United States by Products In Thousands of Metric[5] Tons

Year	Ammunition	Bearing Metal	Building[2]	Cable Covering	Calking Lead	Casting Metals	Collapsible Tubes	Foil	Red Lead & Litharge	Solder	Storage Batteries & Oxides[4]	Chemicals Petrol. Refin.[6]	Type-Metal	White Lead	Total Consumption
1973	81.5	15.7	44.7	43.0	20.1	7.2	2.9	5.0	89.6	71.8	769.4	274.4	21.9	1.7	1,541.2
1974	87.1	14.6	37.7	43.4	19.7	7.5	2.5	4.4	96.2	66.3	851.9	250.5	20.5	2.0	1,599.4
1975	75.1	12.2	39.1	22.1	14.3	7.7	2.2	3.2	65.5	57.3	699.4	208.6	16.2	2.5	1,297.1
1976	73.5	13.1	38.2	15.9	12.5	6.7	2.3	5.1	85.4	63.3	822.4	239.8	15.0	3.0	1,490.1
1977[1]	68.4	12.0	28.4	15.1	9.6	6.0	2.1	3.6	78.1	64.3	945.9	232.9	12.6	6.6	1,582.3
1978[5]	55.8	9.5	23.1	13.9	9.9	3.6	——91.6——			68.4	879.3	178.3	10.8		1,432.7
1979[1]	53.2	9.6	27.6	16.4	8.0	22.7	——90.8——			54.3	814.4	186.9	10.0		1,358.3
1980[3]	48.9	6.8	11.4	13.1	2.4	6.9	——68.4——			28.3	504.8	127.9	6.5		1,048.0

[1] Preliminary. [2] Chiefly pipes, traps & bends & sheet lead. [3] Estimate. [4] Also grids, posts, etc. [5] Data prior to 1978 are in THOUSANDS OF SHORT TONS. [6] Data prior to 1978 are for GASOLINE ANTI-KNOCK ADDITIVES. *Source: Bureau of Mines*

U.S. Foreign Trade of Lead In Thousands of Metric[4] Tons

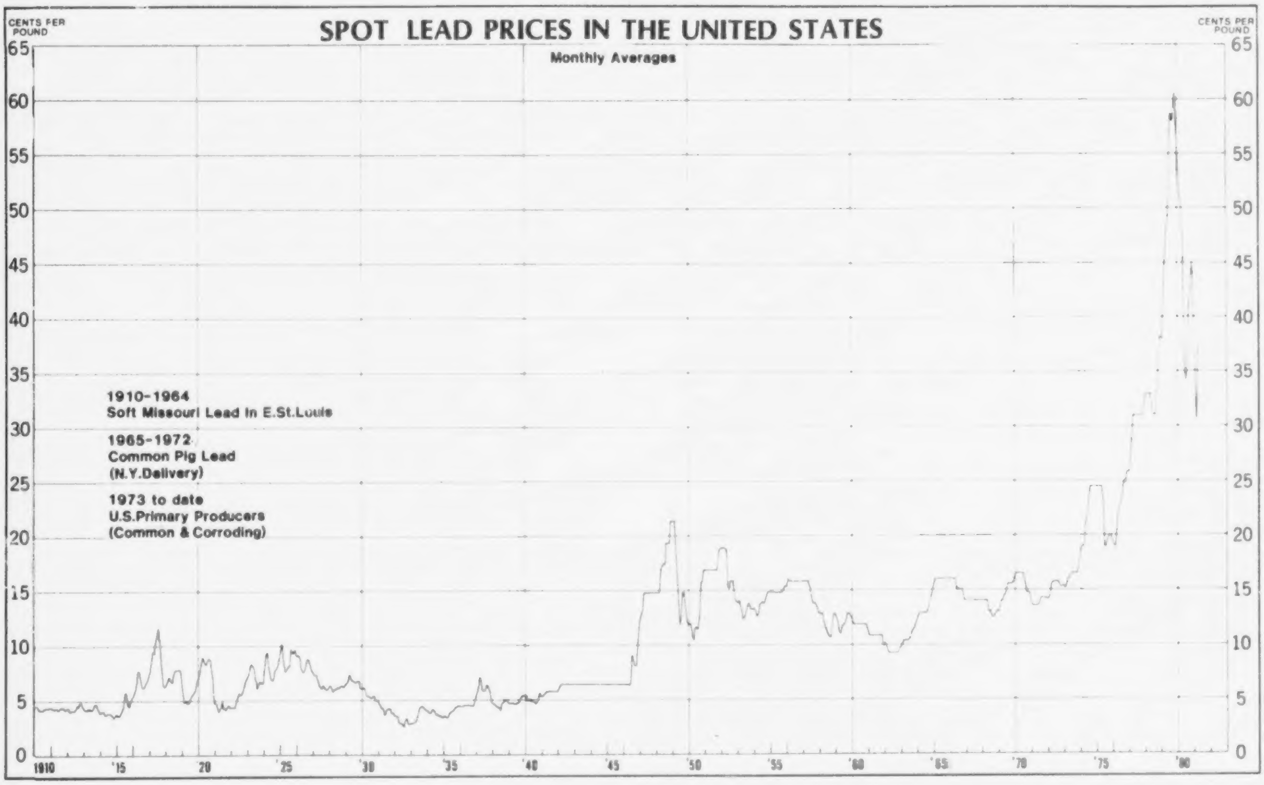
Year	Exports: Unwrought Lead[3]	Wrought Lead[3]	Scrap	Total	Imports for Consumption: Ores, Flue Dust or Fume & Mattes	Base Bullion	Pigs & Bars	Reclaimed Scrap, Etc.	Value Million $	General Imports From: Ore, Flue Dust & Matte: Australia	Peru	Canada	Pigs & Bars: Australia	Mexico	Peru	Yugoslavia
1973	—66.6—		59.9	126.5	94.4	—	178.1	—	71.2	21.7	24.0	18.1	45.6	20.4		—
1974	53.6	8.4	59.4	121.3	62.7	.8	118.4	—	74.2	19.3	26.2	16.0	3.3	28.5	40.0	—
1975	18.4	2.0	50.0	71.2	45.0	.5	99.1	1.7	59.9	15.9	15.7	28.9	—	29.6	19.9	10.2
1976	2.9	3.0	46.9	52.8	89.0	2.3	142.0	2.6	92.2	11.2	9.3	27.7	6.1	44.3	19.7	19.9
1977	4.3	4.7	77.5	86.5	88.8	7.3	230.1	3.5	196.9	16.6	6.6	16.0	19.9	71.8	30.4	6.9
1978	3.2	5.1	98.6	106.9	61.9	4.3	225.4	3.3	203.0	6.5	6.3	19.6	16.3	80.2	25.7	—
1979[1]	7.4	3.3	119.7	130.4	44.4	1.7	182.6	4.0	248.3	1.9	12.4	12.8	17.3	73.6	17.9	—
1980[2]			119.7		29.6	.3	81.3	2.9		3.0	18.0	8.5	11.3	28.6	3.3	—

[1] Preliminary. [2] Estimates. [3] And lead alloys. [4] Data prior to 1977 data are in THOUSANDS OF SHORT TONS. *Source: Bureau of Mines*

Total[1] Lead Consumption in the United States In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1972	122.3	123.7	132.3	122.4	129.0	126.7	91.4	127.4	126.0	132.2	131.4	120.5	1,485
1973	135.3	131.7	143.2	128.4	128.8	129.1	101.9	125.7	124.8	140.7	131.4	120.2	1,541
1974	141.0	129.4	130.9	126.5	142.6	121.5	112.8	144.0	143.7	156.8	136.4	113.8	1,599
1975	100.6	95.5	95.5	100.7	97.2	90.7	86.2	108.6	114.7	123.6	108.9	108.5	1,297
1976	109.3	114.1	125.1	116.4	118.2	118.2	101.4	116.2	121.2	130.4	122.5	120.0	1,429
1977	123.4	114.5	134.4	126.9	121.8	126.2	105.0	124.0	133.5	132.7	120.0	121.8	1,582
1978	122.5	115.0	122.2	122.5	117.4	121.6	99.5	125.2	124.9	140.4	130.9	123.4	1,433
1979	114.6	111.0	124.3	109.5	116.7	108.5	91.3	106.0	109.3	112.1	106.3	94.0	1,304
1980	97.3	84.9	90.0	83.8	84.1	77.2	68.2	79.5	95.6	103.0	92.5		

[1] Represents total consumption of primary & secondary lead as metal, in chemicals, or in alloys. *Source: Bureau of Mines*



Average Price of Lead, U.S. Primary Producers[1] (Common & Corroding) In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1971	13.50	13.50	13.50	13.50	13.50	13.70	14.25	14.25	14.25	14.25	14.25	14.19	13.89
1972	14.15	14.63	15.50	15.63	15.75	15.75	15.75	15.71	15.50	15.21	15.25	15.25	15.34
1973	15.09	15.42	15.97	16.00	16.25	16.50	16.50	16.50	16.50	16.50	16.50[2]	17.96	16.31
1974	18.95	19.00	19.30	21.16	21.50	23.00	24.50	24.50	24.50	24.50	24.50	24.50	23.19
1975	24.50	24.50	24.50	24.50	23.21	19.00	19.00	19.52	20.00	20.00	20.00	19.48	21.52
1976	19.00	19.00	20.30	22.00	22.90	23.00	24.26	24.75	24.75	24.77	25.71	25.75	23.02
1977	26.99	28.95	31.00	31.00	31.00	31.00	31.00	31.00	31.00	31.02	32.00	32.86	30.74
1978	33.00	33.00	33.00	33.00	31.23	31.00	31.00	32.50	34.19	36.05	38.18	38.00	33.68
1979	40.64	43.74	46.09	48.00	49.44	57.14	58.68	57.96	58.47	60.74	58.30	57.11	53.03
1980	51.48	51.06	49.52	45.34	36.00	34.19	35.95	40.95	42.43	45.00	44.06	40.43	42.91
1981	34.13	30.63	35.32	37.68									

[1] Prior to Nov. 1973 prices are for Common Pig (N.Y. Delivery—Carload Lots). *Source: American Metal Market*

U.S. Mine Production of Recoverable Lead In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1971	45.2	41.9	52.8	47.6	46.0	46.1	45.7	48.2	51.0	48.7	49.3	56.1	578.6
1972	48.8	53.3	55.6	52.2	54.1	51.2	52.6	56.9	50.7	51.6	46.5	45.4	618.9
1973	53.5	50.0	45.3	40.1	55.9	43.9	51.4	55.7	51.4	53.7	49.0	53.2	603.0
1974	57.1	52.8	58.0	52.3	53.3	54.9	54.8	58.7	50.0	64.9	53.2	53.9	663.9
1975	55.5	52.5	58.4	55.9	53.2	50.7	37.7	48.0	50.6	56.3	48.9	52.8	621.5
1976	50.4	52.0	57.8	50.6	51.0	50.6	48.1	51.0	48.8	49.0	49.7	51.2	609.5
1977[1]	45.0	49.1	56.8	53.2	48.4	50.5	39.0	52.1	46.2	49.1	49.0	51.1	589.2
1978[1]	49.8	45.0	57.1	49.4	54.3	40.1	35.5	47.6	49.5	55.5	50.0	49.1	582.9
1979[1]	47.6	44.0	42.5	37.0	41.8	42.0	41.4	48.8	34.6	50.0	46.5	43.9	525.6
1980[1]	51.6	50.4	50.0	48.1	50.0	46.3	43.5	41.7	39.3	48.5	39.6	41.0	551.0

[1] Preliminary. *Source: Bureau of Mines*

LEAD

U.S. Lead Recovered from Scrap (Lead Content) In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1971	46.4	48.1	47.0	50.8	48.1	46.4	42.4	46.1	49.1	51.6	50.6	46.0	596.8
1972	45.3	41.8	54.2	51.9	55.0	50.4	48.9	49.6	51.4	49.5	51.6	45.4	616.6
1973	55.3	56.2	56.4	56.8	59.1	56.3	45.7	52.9	47.3	51.4	51.5	48.2	654.3
1974	50.3	54.8	54.9	50.9	53.7	46.4	47.0	49.2	54.3	58.4	56.4	56.8	698.7
1975	47.3	43.6	50.0	46.3	51.6	45.6	46.0	47.4	55.6	59.8	61.0	53.8	658.5
1976	52.0	55.1	64.6	57.0	53.5	57.8	49.8	57.4	56.1	58.4	64.9	57.3	682.5
1977[1]	54.3	58.3	68.2	61.4	61.1	64.9	54.0	62.6	65.7	62.6	60.3	61.2	734.4
1978[1]	54.7	56.4	63.7	57.8	64.3	62.1	54.1	62.6	68.5	71.2	70.1	67.6	753.0
1979[1]	54.6	60.5	65.1	64.1	62.0	65.2	51.3	58.1	58.2	65.0	60.7	54.3	719.0
1980[1]	59.2	55.4	59.6	59.1	51.2	57.1	46.0	52.2	56.0	50.2	58.1		

[1] Preliminary. *Source: Bureau of Mines*

Production[1] of Lead in the United States by Refiners In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1971	51.3	46.7	53.5	53.8	56.5	58.0	57.9	50.5	53.8	66.6	58.0	65.0	671.6
1972	62.7	59.1	63.4	42.8	66.4	58.6	60.1	62.7	56.2	61.7	62.3	58.5	714.5
1973	63.9	65.5	65.9	56.8	65.3	67.9	52.4	70.8	64.9	65.5	64.3	59.2	762.3
1974	62.5	60.3	60.2	52.8	60.2	51.8	59.6	60.6	59.7	58.2	60.7	62.6	709.2
1975	65.0	55.0	60.4	49.5	51.5	45.0	46.4	52.3	52.5	57.9	53.2	52.6	641.4
1976	57.7	56.3	56.2	58.5	61.5	54.1	52.9	57.1	50.2	53.5	49.1	51.3	658.4
1977	51.2	46.6	57.7	50.2	51.2	46.9	41.5	46.9	50.2	56.5	58.0	55.2	612.0
1978	60.0	50.1	55.3	55.5	49.1	44.8	42.5	50.4	51.5	60.9	55.1	54.2	629.2
1979	53.0	52.2	60.6	52.5	58.1	55.0	52.6	49.9	45.4	52.9	54.6	54.3	641.1
1980	56.9	49.3	54.1	47.5	47.0	47.1	52.0	48.2	50.2	52.2	48.4	53.5	606.4
1981	58.0	53.6											

[1] Represents refined lead produced from domestic ores by primary smelters plus small amount of secondary material passing through these smelters. Includes GSA metal purchased for remelt. *Source: American Bureau of Metal Statistics, Inc.*

Shipments[1] (Domestic) of Lead in the United States by Refiners In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1971	50.5	49.0	61.0	58.0	57.6	67.5	46.8	64.1	65.1	72.6	66.9	61.1	720.1
1972	56.4	66.3	73.2	50.4	59.9	54.7	46.5	51.5	55.6	69.2	62.6	58.0	704.2
1973	70.0	69.4	68.1	64.4	67.8	70.4	62.3	69.4	69.2	75.4	72.6	54.5	823.4
1974	72.6	64.6	63.9	57.2	60.8	56.9	65.8	60.9	61.4	63.5	58.9	49.7	736.2
1975	47.2	36.7	37.3	44.2	49.7	38.2	45.4	62.5	64.9	67.6	47.0	54.1	594.9
1976	49.2	54.2	58.8	63.6	62.0	54.8	59.3	66.1	55.8	62.7	57.2	51.2	694.9
1977	57.2	56.0	62.9	53.6	50.7	51.3	42.2	47.4	51.6	54.7	55.0	55.7	638.3
1978	59.9	49.7	51.3	43.5	49.0	44.1	44.3	56.3	56.1	62.8	54.5	53.1	624.5
1979	56.7	54.7	58.9	52.2	58.5	55.2	56.1	47.0	45.9	52.9	39.7	30.8	608.6
1980	40.5	37.6	38.9	28.8	30.1	35.3	36.6	48.0	60.1	55.6	31.0	38.6	481.0
1981	31.9	42.5											

[1] Includes GSA metal. *Source: American Bureau of Metal Statistics, Inc.*

Total Stocks of Lead[1] in the United States at Refiners, at End of Month In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1970	30.8	33.5	36.9	47.3	53.5	63.3	79.1	87.4	86.6	90.9	93.6	98.3
1971	99.1	96.8	89.6	85.4	84.3	77.3	88.4	74.8	63.5	57.6	48.7	52.3
1972	58.3	50.4	38.0	29.1	36.3	40.6	55.6	67.7	69.3	64.0	64.4	67.3
1973	59.4	54.7	39.9	33.2	35.3	32.3	20.5	24.4	26.8	22.8	20.7	27.6
1974	40.8	35.5	35.2	28.1	21.3	19.2	18.9	21.2	21.7	20.8	25.2	38.1
1975	55.5	73.8	96.7	101.6	104.5	111.8	110.7	100.7	87.7	77.7	83.7	82.1
1976	91.5	92.8	90.6	87.8	85.3	84.6	76.7	67.7	61.7	54.3	45.6	46.0
1977	37.9	28.2	23.5	20.9	20.1	15.1	13.7	13.3	12.4	14.8	16.5	16.0
1978	16.3	16.6	20.8	32.6	32.3	33.0	31.0	24.9	20.1	18.1	18.7	19.8
1979	15.8	13.4	15.2	15.0	14.6	14.3	10.8	13.7	13.0	13.9	27.8	51.3
1980	67.8	75.0	71.6	83.8	90.8	82.7	66.3	53.8	35.2	29.2	46.5	60.9
1981	86.6	92.3										

[1] Stocks at own plant & elsewhere. *Source: American Bureau of Metal Statistics, Inc.*

Lumber and Plywood

Residential construction, the largest single user of lumber, is the key determinant of lumber production and demand. In the first half of 1980, actual housing starts declined 37.9 percent from year-earlier levels. Actual starts for single family housing, the most important market for wood products, declined 42.5 percent compared to the same period of 1979, while single family permits dropped 43.7 percent.

Financial conditions that had adversely impacted housing began to improve during the second quarter of 1980. Interest rates fell sharply after their mid-April peak. The interest rate on commitments on 35-year mortgages with a down payment of 25 percent fell from a peak of over 16 percent in April to 15.3 percent in May and down to 13.1 percent in June—still 2 percentage points above the mid-1979 rate.

As a result of the improving financial conditions, housing sales and starts began to improve. Housing starts held steady in April. declined sharply in May, and then surged upward in June. July starts continued the upward trend. However, U.S. home mortgage originations fell 30 percent to $131 billion in 1980, according to the Department of Housing and Urban Development (HUD). Mortgage interest rates rose from mid 1980 lows and by early May 1981, HUD had raised FHA and VA single family mortgage rates to a record high 15.5 percent. In May, 1981, the National Association of Home Builders forecast 1981 housing starts at only 1.2 million units versus 1.3 million in 1980 and 1.7 million in 1979.

Dampened by depressed housing construction and limited demand from other wood-consuming industries, lumber production in 1980 was estimated at 31.8 billion board feet, down 14.1 percent from 1979. Softwood lumber, about 75 percent of total lumber, was expected to reach 25.0 billion feet.

Most of the decline in demand came from reductions in residential construction, although demand for all types of construction was down from the 1979 level. Other wood-consuming industries, such as furniture, pallets, repairs, and remodeling, were also operating at low levels. Total domestic lumber consumption in 1980 was estimated at 39.7 billion board feet. Both lumber manufacturers and consuming industries reduced work schedules and kept inventories to the minimum.

Softwood lumber was more seriously affected than hardwood lumber in 1980, due to its dependence on residential construction, its largest single user. Softwood production for 1980 was expected to reach 25.0 billion board feet, about 15.3 percent below the 1979 production of 29.5 billion board feet.

Foreign Trade

U.S. lumber imports, chiefly softwoods from Canada, declined about 18 percent in 1980 to only 9.3 billion board feet because of the reduced level of housing construction. Imports have supplied 25 percent to 29 percent of the annual U.S. lumber consumption during the past few years. Despite the decline in imports, the percent of imports to total consumption remained at 29.0 percent in 1980.

Exports provided the one optimistic note for the lumber industry. Both softwood and hardwood lumber exports expanded rapidly in the first half of 1980. Softwood exports increased 25 percent and hardwood exports rose 27 percent during the comparable period. Japan, the largest market, together with Canada, Italy, West Germany, and Mexico, bought about 80 percent of all U.S. lumber exports. Total exports for 1980 were expected to reach the 1979 level of more than 2 billion board feet.

Residential construction consumes almost half of U.S. softwood plywood production. Nonresidential construction, repairs and remodeling consume a fourth of softwood plywood output. The remaining fourth goes into industrial and shipping uses.

Softwood plywood shipments in 1980 amounted to only about 17.1 billion square feet (⅜ inch basis). Among the factors that contributed to the decline were a drop off in housing and other construction, expansion of softwood plywood capacity in the South, and competition from structural particleboard.

Softwood plywood, hardwood plywood, and particle-

Salient Statistics of Lumber in the United States

Year	Industrial Roundwood Used for								Fuelwood Consumption	Apparent Consumption, All PDT's	National Forest Stumpage Prices				
	Lumber	Pulp Products	Plywood & Veneer	Other Pdts.[3]	Total[2]	Imports	Exports	Apparent Consumption			All Eastern Hardwoods	Douglas Fir	Southern Pine	Western Hemlock	Ponderosa Pine
	In Million Cubic Feet										$ Per 1,000 Board Ft.				
1968	5,545	3,385	1,120	485	11,060	2,400	1,235	12,220	700	12,920	23.60	61.20	42.20	35.60	30.20
1969	5,415	3,585	1,050	455	11,030	2,515	1,295	12,250	620	12,870	30.20	82.20	51.70	45.10	71.00
1970	5,355	3,835	1,020	425	11,105	2,430	1,370	12,180	540	12,530	26.90	41.90	44.10	20.50	32.10
1971	5,495	3,560	1,175	415	11,035	2,675	1,160	12,575	500	13,075	24.60	49.10	52.20	20.60	37.60
1972	5,605	3,520	1,300	405	11,440	3,045	1,360	13,030	475	13,505	34.30	71.70	65.60	49.00	65.80
1973	5,730	3,755	1,320	405	11,925	3,105	1,475	13,280	505	13,785	44.70	138.10	93.40	99.20	92.30
1974	5,145	4,220	1,150	395	11,540	2,695	1,520	12,395	535	12,930	44.40	202.40	76.20	110.80	100.60
1975	4,890	3,485	1,165	385	10,570	2,145	1,390	10,395	570	11,505	34.00	169.50	57.00	68.80	71.20
1976	5,475	3,805	1,355	380	11,815	2,840	1,870	12,785	600	12,385	34.90	176.20	87.00	79.70	103.20
1977	5,730	3,645	1,425	390	11,965	3,310	1,795	13,480	635	14,115	37.90	225.90	100.30	89.30	131.40
1978[1]	5,820	3,745	1,460	406	12,230	3,760	1,870	14,125	680	14,805	41.10	250.30	134.50	113.60	164.70
1979[1]											46.80	394.40	155.20	200.80	239.00

[1] Preliminary, subject to revision. [2] Excludes fuelwood. Includes cooperage logs, poles & piling, fence posts, etc.

Sources: National Lumber Manufacturers Ass'n.: U.S. Dept. of Commerce; Forest Service board have unique properties that make some uses exclusive for a particular product, but are directly competitive for many other uses. Specifically, softwood plywood will face strong competition from structural particleboard for many construction uses.

Softwood plywood is defined as plywood having at least three wood plies with a face of softwood veneer. The back ply or inner plies may be any combination of hardwood or softwood veneer, and in a few selected instances, lumber, particleboard, or hardboard. Hardwood plywood is defined similarly except the face ply is hardwood veneer. Particleboard is a general term for a panel manufactured from wood materials consisting of particles or combinations of particles (granules, chips, slivers, flakes, shavings) and fibers bonded together with synthetic resins or other suitable bonding systems.

The need to improve the use of timber will continue to affect the softwood plywood industry. It has already resulted in a new family of wood panel products. Some intermediate panel products—wood composites—are similar to conventional plywood. They have veneer faces with particleboard cores or veneer cores with particleboard or fiberboard faces.

The particleboard parts of these products can use a lower quality tree than can veneer. Thus, a specific volume of wood can produce more square footage of composite wood panel products than conventional plywood. Overall, wood composites have similar performance characteristics to plywood, but for specific uses, one may offer advantages over the other.

Panel product research appears to be headed towards an improved fiber-particleboard type of panel called structural particleboard as a major substitute for plywood. Structural particleboard has already begun to replace softwood plywood for such construction uses as roof, wall, and floor sheathing.

United States Lumber Shipments In Millions of Board Feet

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1971	2,738	3,075	3,472	3,560	3,313	3,537	3,209	3,345	3,294	3,336	3,067	3,015	37,769
1972	2,942	3,186	3,566	3,422	3,628	3,429	3,236	3,468	3,387	3,520	3,203	2,776	39,180
1973	3,153	3,102	3,474	3,386	3,351	3,264	3,044	3,402	3,096	3,312	3,008	2,623	38,353
1974	2,647	2,850	3,219	3,377	3,310	2,949	2,736	2,888	2,584	2,658	2,265	1,978	33,909
1975	2,047	2,164	2,507	2,843	2,820	2,739	2,820	2,851	3,061	3,097	2,689	2,647	32,254
1976	2,762	2,790	3,107	3,155	2,944	3,150	3,122	3,234	3,167	3,167	2,911	2,951	37,030
1977[1]	2,683	2,873	3,362	3,364	3,314	3,387	3,077	3,358	3,296	3,269	2,859	2,983	37,520
1978[1]	2,699	2,741	3,158	3,133	3,355	3,548	3,156	3,357	3,250	3,262	3,116	2,907	37,712
1979[1]	2,813	2,756	3,279	3,107	3,329	3,087	3,128	3,408	3,106	3,224	2,777	2,589	36,514
1980[1]	2,707	2,791	2,538	2,343	2,512	2,530	2,454	2,716	2,708	2,851	2,494	2,350	31,422

[1] **Preliminary.** *Source: National Lumber Manufacturers' Association*

Stocks (Gross) of Lumber in the United States, Beginning of Month In Millions of Board Feet

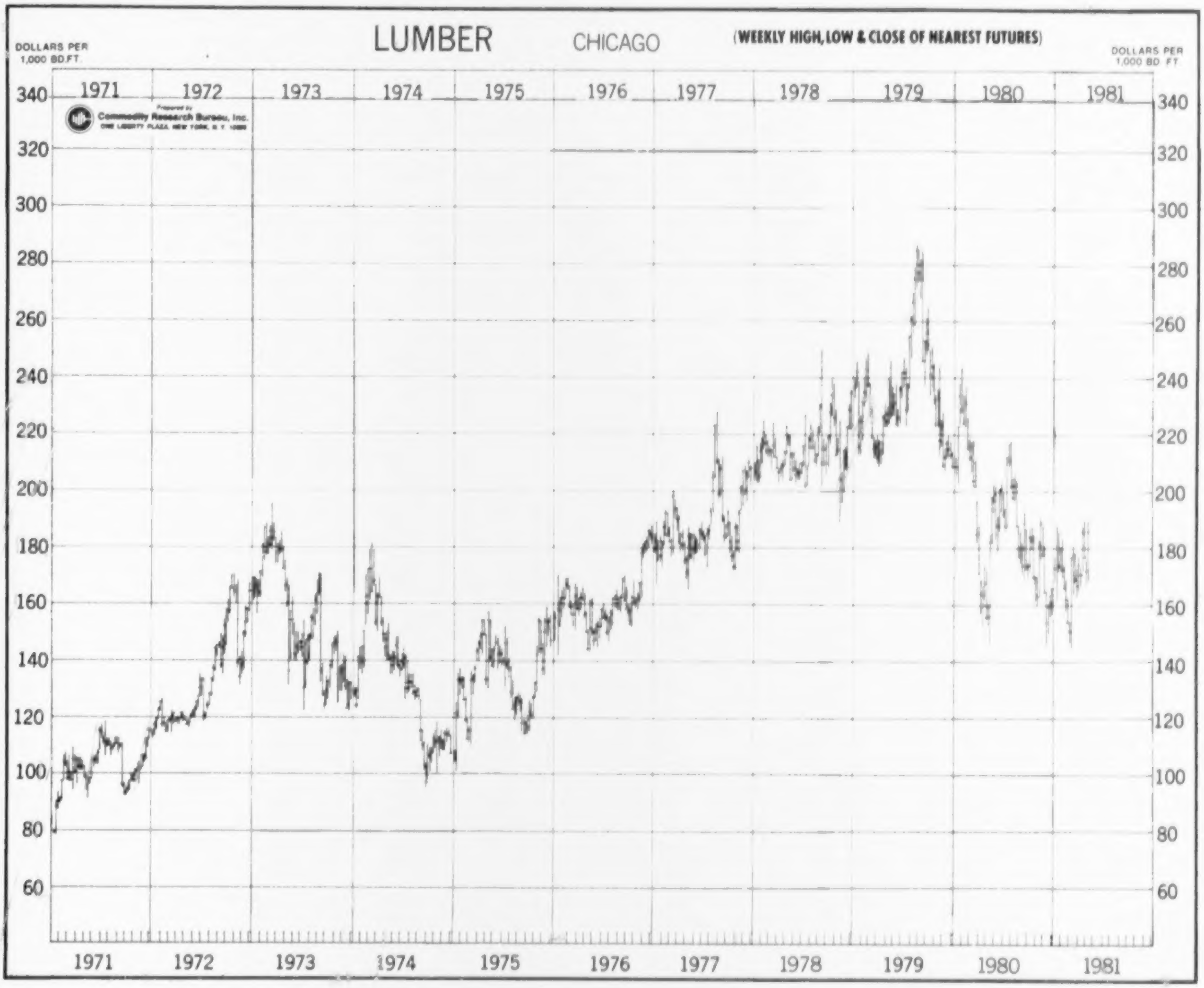
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1970	5,359	5,583	5,772	5,921	5,996	6,137	6,061	6,141	6,713	6,235	6,288	6,233
1971	6,365	6,428	6,277	6,143	6,042	5,895	5,741	5,723	5,594	5,532	5,397	5,358
1972	5,288	5,155	5,040	4,857	4,704	3,944	4,368	4,236	4,184	4,097	4,149	4,094
1973	4,152	3,954	3,926	3,802	3,896	3,835	3,765	3,758	3,813	3,967	4,108	4,157
1974	4,457	4,499	4,596	4,568	4,648	4,627	4,683	4,904	5,042	5,196	5,229	5,160
1975	5,134	5,137	5,123	5,064	5,000	5,052	5,124	5,101	5,165	5,090	5,140	4,982
1976	4,967	4,894	4,926	4,963	5,016	5,123	4,922	4,763	4,794	4,854	4,991	5,062
1977[1]	5,091	5,171	5,228	5,325	5,197	5,133	4,964	4,845	4,787	4,859	4,876	4,855
1978[1]	4,862	4,963	5,128	5,201	5,190	5,038	4,877	4,705	4,632	4,669	4,740	4,731
1979[1]	4,805	4,811	4,932	4,964	4,975	4,868	5,003	4,893	4,843	4,875	5,063	5,207
1980[1]	5,210	5,301	5,374	5,721	5,769	5,568	5,534	5,570	5,659	5,776	5,832	5,826
1981[1]	5,805											

[1] **Preliminary.** *Source: National Lumber Manufacturers' Association*

Average Price of Hardwood Lumber—Oak, Red, No. 1 Common In Dollars Per Thousand Board Feet

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1972	143.00	146.00	146.00	150.00	158.00	165.00	170.00	170.00	170.00	170.00	170.00	170.00	160.67
1973	175.00	190.00	200.00	200.00	220.00	230.00	235.00	260.00	275.00	275.00	280.00	280.00	235.00
1974	280.00	280.00	280.00	280.00	280.00	280.00	275.00	270.00	260.00	250.00	240.00	235.00	267.50
1975	225.00	215.00	190.00	190.00	190.00	190.00	190.00	195.00	200.00	205.00	215.00	215.00	201.67
1976	215.00	215.00	215.00	215.00	215.00	215.00	275.00	275.00	275.00	275.00	275.00	275.00	245.00
1977	277.00	285.00	290.00	300.00	309.00	315.00	315.00	315.00	315.00	315.00	315.00	320.00	305.92
1978	322.00	350.00	360.00	365.00	380.00	390.00	390.00	390.00	390.00	400.00	405.00	405.00	378.92
1979	405.00	405.00	405.00	405.00	405.00	405.00	405.00	405.00	400.00	400.00	385.00	385.00	400.83
1980	375.00	375.00	370.00	360.00	355.00	345.00	335.00	325.00	325.00	315.00	330.00	335.00	345.41

Source: Bureau of Labor Statistics (0812-0102)



High, Low & Closing Prices of May Lumber Futures at Chicago In Dollars per 1,000 Board Feet

Year of Delivery		Year Prior to Delivery									Delivery Year					Life of Delivery Range
	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	
1978 High	—	—	—	211.9	212.4	202.0	201.9	206.9	208.0	216.5	218.9	223.4	219.0	214.0	222.5	223.4
Low	—	—	—	196.5	193.8	192.0	192.8	184.5	187.0	203.9	203.0	208.5	205.2	203.2	213.1	184.5
Close	—	—	—	210.8	198.6	199.5	198.5	190.8	207.1	214.5	209.9	212.3	207.8	213.9	214.7	—
1979 High	—	—	—	189.0	193.0	195.5	206.5	211.0	202.5	210.9	219.8	234.5	228.3	231.2	246.0	246.0
Low	—	—	—	181.6	183.5	187.0	192.5	200.5	185.1	187.2	201.7	218.5	209.8	209.4	223.1	181.6
Close	—	—	—	183.3	192.0	192.7	202.0	201.3	194.6	209.9	217.6	223.4	211.8	225.2	245.2	—
1980 High	—	—	—	215.0	217.0	227.0	239.5	241.0	227.5	230.2	244.4	242.2	219.3	183.0	160.0	244.4
Low	—	—	—	208.5	211.0	214.0	222.0	197.7	201.2	216.5	215.3	215.0	181.5	153.1	146.5	146.5
Close	—	—	—	212.7	214.6	222.7	233.5	206.3	222.8	218.4	234.1	216.3	185.5	161.5	152.2	—
1981 High	221.0	210.2	222.0	225.5	233.5	222.0	215.5	214.0	220.0	210.7	205.2	198.3	181.4	190.4		
Low	176.0	164.0	202.0	210.6	218.0	191.9	195.3	194.2	205.7	175.5	185.3	169.5	164.3	163.2		
Close	178.1	204.5	220.8	218.5	219.1	196.9	198.5	207.4	208.5	194.5	195.8	169.8	169.6	178.4		
1982 High	—	—														
Low	—	—														
Close	—	—														

Source: Chicago Mercantile Exchange

LUMBER AND PLYWOOD

Residential Construction Contracts Awarded (All Types) in U.S. In Millions of Dollars

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1971	1,631	1,818	2,729	3,168	3,310	3,485	3,357	3,255	3,196	3,171	3,001	2,997	34,714
1972	2,667	2,664	3,617	3,971	4,428	4,375	3,864	4,671	4,135	4,298	3,663	3,120	44,975
1973	3,195	3,277	4,643	4,512	4,754	4,612	4,224	4,233	3,638	3,673	3,299	2,341	45,696
1974	2,231	2,678	3,374	3,924	3,862	3,546	3,350	3,060	2,503	2,457	1,931	1,715	34,404
1975	1,540	1,532	2,272	2,987	3,072	3,116	3,081	2,833	2,951	3,167	2,478	2,259	31,261
1976	2,157	2,546	3,618	4,003	3,955	4,166	4,149	4,099	3,758	4,064	3,716	3,236	43,651
1977[1]	2,927	3,427	5,149	5,266	5,660	5,945	5,548	6,148	5,518	5,452	5,281	4,305	62,017
1978[1]	3,884	3,862	6,139	6,854	7,652	7,722	6,710	6,910	6,317	6,821	5,973	4,781	74,949
1979[1]	4,468	4,588	6,870	5,969	8,076	7,277	7,008	7,069	6,248	6,864	4,704	4,304	74,557
1980[1]	4,055	4,337	4,584	4,373	4,495	5,029	6,105	5,897	6,069	6,785	5,847	5,570	63,206
1981[1]	4,207												

[1] Preliminary. *Source: F. W. Dodge Co.*

United States Imports of Saw Mill Products In Millions of Board Feet

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1970	515	423	488	535	572	562	478	540	553	533	514	422	6,095
1971	505	473	683	563	650	761	767	624	797	516	582	679	7,599
1972	757	703	768	745	889	761	888	690	820	815	886	689	9,428
1973	935	760	883	837	931	899	823	623	453	764	780	640	9,540
1974	634	547	700	721	815	765	653	541	569	530	414	361	7,249
1975	337	377	536	571	589	671	677	431	422	388	415	552	5,968
1976	477	527	627	701	669	573	890	680	781	715	759	779	8,178
1977	691	721	906	890	996	999	934	920	938	858	956	911	10,698
1978	865	840	939	915	1,173	1,117	1,194	1,119	1,014	1,091	979	954	12,199
1979	925	761	998	925	1,237	1,011	1,010	1,043	999	924	909	771	11,513
1980	727	923	896	655	730	830	876	804	863	867	892	779	9,859
1981	756												

Source: Department of Commerce

United States Exports of Saw Mill Products In Millions of Board Feet

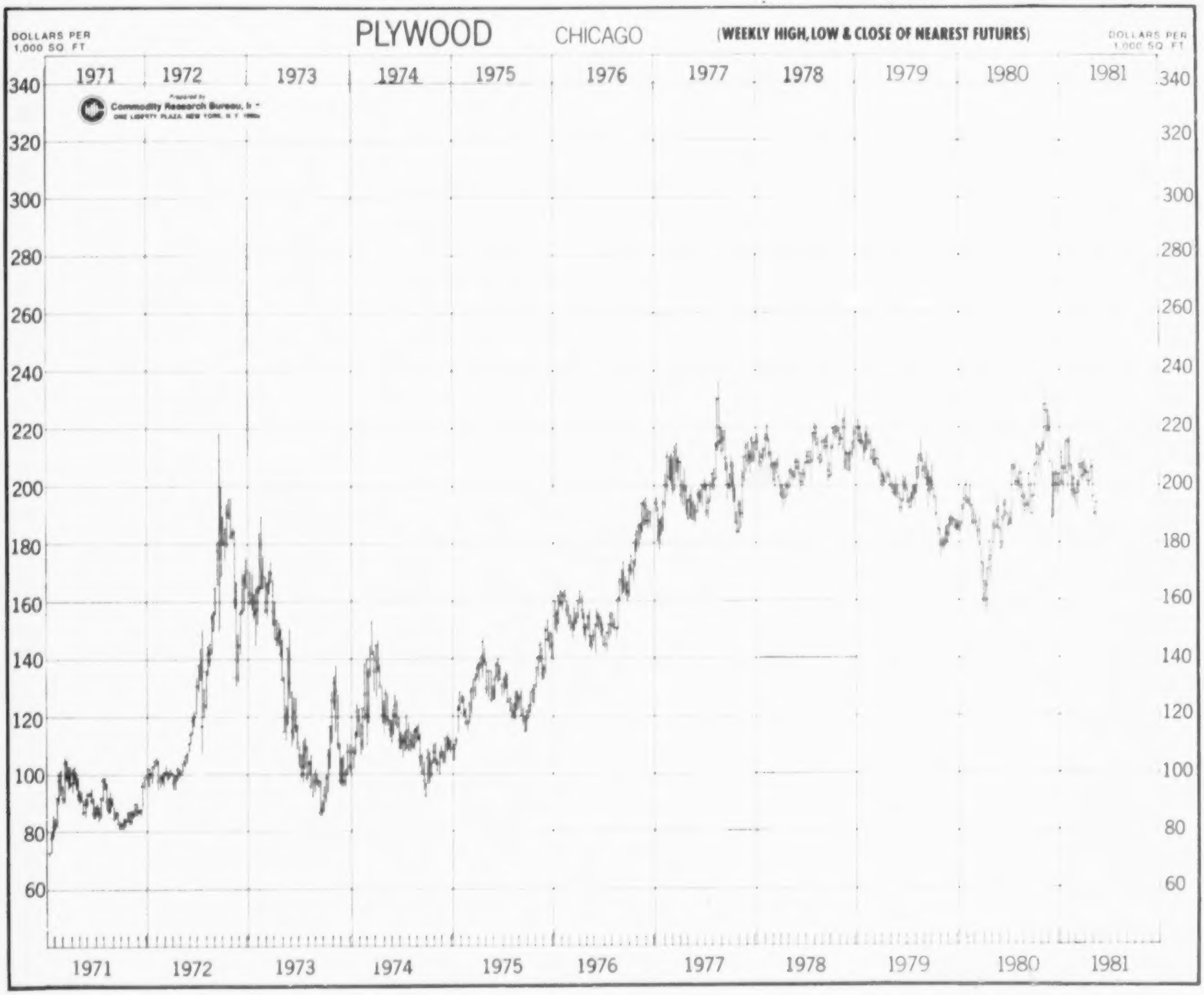
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1970	89	92	104	111	91	129	93	119	139	97	99	103	1,266
1971	80	87	91	90	88	95	79	85	72	88	131	95	1,081
1972	92	101	152	120	126	127	170	132	129	139	104	103	1,390
1973	125	130	176	194	201	174	152	181	204	192	141	129	1,959
1974	163	145	186	188	206	135	115	143	100	139	98	87	1,668
1975	86	112	233	130	113	125	155	151	142	126	131	131	1,643
1976	132	147	139	161	156	152	254	153	165	160	140	150	1,909
1977	144	147	169	142	167	150	116	156	128	99	108	142	1,670
1978	72	94	110	125	212	118	93	88	94	96	96	100	1,300
1979	97	121	129	126	127	126	106	121	147	112	124	113	1,447
1980	120	116	180	178	170	153	119	134	118	123	117	127	1,655

Source: Department of Commerce

Lumber Production[1] in the United States In Millions of Board Feet

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1970	2,902	2,859	3,164	3,203	3,080	2,967	3,004	3,045	3,104	3,201	2,733	2,639	34,548
1971	2,794	2,983	3,339	3,451	3,168	3,384	3,194	3,220	3,242	3,199	3,028	2,924	36,693
1972	2,832	3,076	3,383	3,272	3,420	3,301	3,102	3,417	3,303	3,528	3,193	2,664	38,044
1973	3,012	3,074	3,456	3,272	3,290	3,207	3,038	3,456	3,250	3,453	3,057	2,710	38,658
1974	2,741	2,945	3,191	3,457	3,302	3,006	2,895	3,024	2,736	2,691	2,194	1,930	34,592
1975	2,072	2,148	2,480	2,779	2,849	2,814	2,797	2,914	2,986	3,147	2,530	2,500	32,087
1976	2,821	2,804	3,144	3,209	2,960	2,949	2,963	3,265	3,226	3,305	2,972	2,921	37,153
1977[2]	2,822	2,930	3,388	3,260	3,253	3,160	2,975	3,290	3,368	3,268	2,839	2,944	37,520
1978[2]	2,843	2,904	3,222	3,167	3,203	3,333	2,988	3,263	3,285	3,333	3,102	2,931	37,657
1979[2]	2,877	2,877	3,306	3,119	3,219	3,143	3,018	3,355	3,131	3,412	2,914	2,631	37,061
1980[2]	2,798	2,855	2,879	2,257	2,307	2,486	2,479	2,783	2,818	2,903	2,480	2,329	31,885

[1] Adjusted with Census reports on lumber production. [2] Preliminary. *Source: National Lumber Manufacturers' Association*



Month End Open Interest of Lumber Futures at Chicago In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	7,523	8,770	8,202	8,390	9,233	8,362	7,730	8,078	7,551	7,365	6,547	8,122
1979	8,420	9,059	7,851	7,127	8,055	7,380	8,901	11,039	10,426	10,664	10,125	10,260
1980	10,839	10,587	9,948	10,130	11,452	11,736	12,461	11,644	13,734	14,251	12,829	9,338
1981	8,882	9,053	8,029	8,102								
1982												

Source: Chicago Mercantile Exchange

Volume of Trading of Lumber Futures at Chicago In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	47,910	43,703	46,876	43,759	42,578	36,330	38,252	46,138	49,347	55,495	54,371	55,739	560,498
1979	60,964	57,594	52,316	43,097	46,530	50,265	56,421	62,923	56,421	71,581	63,777	39,980	649,478
1980	59,063	61,288	73,412	86,057	81,960	68,528	76,296	65,740	73,660	76,984	59,076	58,376	838,676
1981	57,173	45,937	54,295	60,517									
1982													

Source: Chicago Mercantile Exchange

LUMBER AND PLYWOOD

High, Low & Closing Prices of May Plywood Futures at Chicago In Dollars per 1,000 Square Feet

Year of Delivery	Year Prior to Delivery										Delivery Year					Life of Delivery Range
	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	
1978 High	217.5	215.5	202.9	212.5	212.5	212.8	210.5	214.8	214.0	220.0	221.9	222.5	212.0	201.8	206.1	222.5
Low	209.5	199.0	194.0	196.0	194.0	190.0	197.5	190.9	192.6	208.1	206.0	208.1	195.5	191.5	199.2	190.0
Close	213.5	200.0	196.1	209.5	202.5	207.8	206.0	192.4	213.3	219.5	212.0	210.5	196.8	199.0	203.3	—
1979 High	208.0	203.8	206.0	199.0	199.6	203.8	211.0	213.3	208.5	211.8	217.3	221.0	215.5	205.5	203.4	221.0
Low	200.0	196.0	195.0	192.5	192.5	196.2	196.8	205.0	196.0	198.6	204.6	208.4	199.5	198.1	195.0	192.5
Close	200.0	202.3	196.2	196.3	198.6	200.0	205.0	207.0	201.5	209.5	216.1	210.3	201.2	202.3	195.7	—
1980 High	205.5	208.9	206.4	204.0	202.0	201.0	201.7	203.5	192.0	197.5	206.0	203.9	194.9	182.0	193.5	208.9
Low	203.2	203.0	201.0	198.0	195.0	195.5	194.0	181.1	183.5	189.0	188.5	188.5	165.5	155.2	170.5	155.2
Close	203.8	206.0	204.2	201.0	198.5	197.3	199.0	184.5	190.1	193.5	200.7	191.6	172.4	171.5	192.5	—
1981 High	207.0	209.5	214.0	314.0	221.0	216.0	215.0	222.5	232.3	226.5	221.0	221.8	212.5	209.3		
Low	181.5	178.5	194.5	200.4	201.0	196.2	197.0	201.5	218.5	194.0	205.5	199.3	198.2	194.2		
Close	185.5	195.2	205.5	203.0	210.5	201.5	203.8	219.5	223.5	208.0	220.3	203.4	205.0	195.2		
1982 High	—	240.5														
Low	—	200.0														
Close	—	231.0														

Source: Chicago Board of Trade

Month End Open Interest of Plywood Futures at Chicago In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	7,272	7,996	6,638	5,740	6,733	6,507	6,069	6,634	4,882	5,228	4,585	4,484
1979	4,364	4,430	3,284	3,621	3,932	3,637	3,584	4,181	3,711	4,048	4,422	3,742
1980	3,316	3,196	3,260	5,416	5,017	5,097	3,974	3,685	3,987	4,210	4,133	3,468
1981	3,491	4,411	4,032	4,317								

Source: Chicago Board of Trade

Volume of Trading of Plywood Futures at Chicago In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	29,066	30,771	25,071	24,144	21,797	19,237	18,913	18,056	16,346	24,834	17,702	15,046	261,483
1979	18,102	16,761	13,070	9,364	10,836	12,574	9,389	11,543	11,150	14,958	10,053	9,220	146,570
1980	10,605	11,908	12,452	19,084	15,266	13,393	16,903	13,384	13,185	14,191	12,859	16,310	169,550
1981	13,282	14,439	17,667	20,894									

Source: Chicago Board of Trade

Average Price of Softwood Lumber—Redwood, Boards, Clear, F. G., Dry —$ Ths. Board Feet

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1968	165.24	164.54	165.24	164.71	163.31	163.31	163.31	163.31	165.94	169.33	169.33	175.42	166.36
1969	179.83	195.55	208.29	213.84	215.44	213.07	213.84	215.44	215.44	222.46	225.60	227.24	212.59
1970	227.24	225.69	225.69	225.69	225.69	225.69	225.69	227.32	228.14	228.14	229.65	226.54	226.76
1971	228.10	228.10	228.10	228.10	224.99	224.22	224.22	232.02	232.02	231.87	226.28	225.35	227.78
1972[2]	217.76	223.54	231.28	244.23	246.14	249.96	249.96	256.79	256.79	256.79	256.79	256.79	245.57
1973	256.79	273.54	292.16	304.50	320.40	338.44	338.44	346.20	354.21	360.41	379.34	405.23	330.81
1974	414.54	426.95	433.16	445.57	451.78	451.78	451.78	484.45	463.87	448.35	435.94	431.28	444.95
1975[1]	513.09	513.09	513.09	513.09	506.11	506.11	506.17	501.27	501.27	501.27	497.60	494.66	505.56
1976	494.90	494.90	500.54	502.99	502.99	502.99	502.99	507.89	510.34	510.34	510.34	517.69	504.91
1977	530.06	536.18	559.46	584.20	589.10	598.54	609.56	609.56	643.13	650.48	653.78	677.06	603.43
1978	710.01	741.86	740.64	779.84	795.76	812.18	812.42	812.42	852.72	852.72	869.32	874.47	804.53
1979	887.57	904.36	933.76	952.13	977.55	989.19	991.64	991.64	1032.51	1040.27	1048.44	1048.44	983.13
1980	1048.44	1051.70	1051.70	1057.91	1046.97	1046.97	1046.97	1046.97	1050.23	1050.23	1055.13	1069.83	1051.92
1981													

[1] Data prior to 1975 are for F. G., 1" x 4", R. L., dried, mixed carlot, f.o.b. mill (rail shipment) [Douglas Fir Drop Siding (C & Better)]. [2] Data prior to 1972 are for Douglas Fir FLOORING. *Source: Bureau of Labor Statistics* (0811–0355.06)

Average Price of Ponderosa Pine[1] Softwood Lumber—No. 3 In Dollars Per Thousand Board Feet

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1968	70.78	71.86	75.90	87.26	92.16	88.72	87.67	89.03	89.99	94.11	98.64	106.49	87.72
1969	115.76	129.86	145.12	163.54	145.05	110.28	82.19	79.64	74.90	76.02	77.83	86.00	107.18
1970	90.55	84.43	82.45	82.95	90.14	94.14	88.00	82.39	81.31	78.54	75.64	74.90	83.79
1971	72.36	75.01	84.94	101.21	99.29	92.70	96.40	106.24	109.10	106.57	105.14	108.28	96.44
1972	113.20	117.69	121.77	127.01	130.52	134.59	135.18	139.34	138.78	138.44	138.05	136.37	130.91
1973	139.85	154.21	183.12	212.59	243.95	228.13	197.73	160.65	155.33	154.98	155.90	168.99	179.62
1974	193.90	190.23	204.37	234.99	231.32	200.60	174.35	138.40	121.26	100.46	99.66	120.06	151.38
1975	126.78	132.83	150.35	154.31	173.62	170.71	145.95	141.17	131.78	128.87	127.30	—	131.97
1976	154.01	177.50	198.52	209.92	189.73	165.91	161.57	168.63	182.50	198.68	198.57	206.15	184.31
1977	227.16	232.18	245.58	251.21	239.98	216.44	219.96	232.57	236.48	235.28	215.40	226.17	231.53
1978	247.58	263.85	264.90	267.57	240.07	251.25	232.33	236.92	254.23	267.17	N.A.	317.01	237.07
1979	304.49	332.11	366.87	371.17	342.59	338.16	306.16	301.95	309.48	316.41	277.35	240.42	317.26
1980	252.62	291.36	314.97	242.34	215.48	252.06	310.05	327.35	304.06	293.25	306.22	340.83	287.55
1981													

[1] No. 3, 1" x 12", R.L. (6' and over). *Source: Bureau of Labor Statistics* (0811–0339.04)

Average Price of Softwood Yellow Southern Pine Flooring[1] (C & Better) —$ Per Ths. Board Feet

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1968	158.93	156.43	158.61	159.92	161.49	161.49	162.91	164.02	164.38	164.51	165.46	167.03	162.10
1969	173.36	180.90	186.69	188.51	188.51	186.41	181.55	180.88	180.88	183.68	185.78	187.15	183.69
1970	187.15	187.15	187.15	187.15	189.35	189.35	189.35	189.06	189.06	189.83	189.83	189.02	188.62
1971	188.20	188.98	188.16	192.28	192.28	194.19	199.04	199.04	199.04	199.04	199.04	199.04	194.86
1972	200.34	202.10	203.03	207.54	207.54	205.97	205.97	205.97	207.14	207.52	209.87	209.87	206.07
1973	209.87	219.91	243.04	253.82	266.89	298.90	277.67	287.47	315.23	315.23	320.13	320.13	277.36
1974	321.77	321.77	329.93	346.27	346.27	347.90	352.80	352.80	352.80	352.80	341.37	341.37	342.90
1975	341.37	341.37	344.63	344.63	346.27	344.63	336.47	336.47	336.47	329.93	331.57	333.20	338.92
1976	339.73	341.37	346.27	346.27	346.27	346.27	348.55	351.17	354.43	355.09	356.07	356.07	348.96
1977	356.07	356.07	359.33	362.60	364.23	367.50	375.67	380.57	387.10	388.73	392.00	395.27	373.76
1978	400.17	403.23	406.87	405.07	409.97	409.97	413.23	419.11	421.40	424.01	424.67	426.30	413.67
1979	426.30	427.93	431.20	433.81	436.10	437.73	454.07	461.25	465.50	472.03	478.57	478.57	450.26
1980	478.57	483.47	488.37	476.93	476.93	476.93	480.20	483.47	486.73	493.27	493.27	493.27	404.11
1981													

[1] Flooring, C and better, F. G., 1" x 4" x S/L. *Source: Bureau of Labor Statistics* (0811–0221.08)

Average Price of Douglas Fir Softwood Lumber—Dimension, Construction, Dried, 2" × 4", R.L.[1] In Dollars Per Thousand Board Feet

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1968	95.75	98.62	105.88	103.56	103.84	104.66	108.47	111.01	112.36	113.06	113.06	123.98	107.85
1969	130.11	137.49	147.11	140.41	125.96	109.95	95.71	95.08	94.61	94.28	96.15	95.37	113.52
1970	92.86	91.43	90.66	92.06	92.68	90.80	90.33	93.00	95.04	94.27	92.85	90.68	92.22
1971	91.45	98.65	110.95	111.50	112.12	116.72	125.72	129.92	128.88	128.59	127.45	130.23	117.68
1972	134.97	135.33	135.70	137.42	141.64	143.55	149.32	149.72	150.30	150.70	151.28	151.28	144.27
1973	152.46	168.46	193.96	197.22	209.91	192.13	180.93	180.19	190.27	176.11	170.43	170.27	181.86
1974	159.25	163.06	181.51	186.18	179.03	167.63	162.47	152.62	146.22	135.85	139.09	133.21	158.84
1975	138.41	146.90	147.29	156.60	169.67	161.54	165.47	169.77	166.79	160.09	157.56	166.40	158.88
1976	175.43	178.29	184.90	180.05	176.06	171.45	187.49	195.59	215.08	207.79	204.02	218.77	191.24
1977	228.38	225.50	232.09	226.05	225.42	213.79	230.93	242.51	256.92	237.27	218.03	227.70	230.38
1978	238.08	241.81	246.28	238.48	238.43	245.28	245.00	272.06	274.74	266.66	271.51	262.40	253.39
1979	258.77	260.53	261.46	267.69	271.17	270.53	274.89	303.60	320.46	304.34	283.66	249.76	277.24
1980	237.36	236.96	222.70	184.83	185.56	237.01	238.97	248.37	232.98	224.31	214.86	217.12	223.42
1981													

[1] Dried, S4S, mixed carlots, f.o.b. mill, rail shipment. *Source: Bureau of Labor Statistics* (0811–0105.06)

Magnesium

U.S. production of magnesium metal in 1980 was about 5 percent above output in 1979, according to preliminary Bureau of Mines data. The domestic production of magnesium compounds was almost unchanged from the 1979 level, with almost all of the output derived from seawater, lake, or well brines. On December 11, 1980, the American Magnesium Co. shut down the last 6,000-ton-per-year primary production line at its Snyder, Texas facility, citing the lack of brine feed.

Domestic consumption of magnesium metal in 1980 was estimated by the Bureau of Mines in the 109,000 to 125,000 ton range, compared with 99,000 to 109,000 tons in 1979. The manufacture of aluminum-base alloys accounted for an estimated 56 percent of total metal consumption. Magnesium castings and wrought products accounted for 17 percent of total use, followed by reducing agents—7 percent; cathodic protection—6 percent; the manufacture of nodular cast iron—4 percent, and other uses—10 percent. Over 80 percent of magnesium compound consumption was for the production of high temperature basic refractories. The remainder was used to prepare caustic-calcined and specified magnesias and other magnesium compounds.

The U.S. is a net exporter of magnesium, and as of November 30, 1980, there was no National Defense Stockpile goal or inventory of magnesium metal.

Aluminum and zinc may be substituted for magnesium castings and wrought products, and alumina and silica for magnesia in refractories.

The price for primary metal ingot rose from $1.09 per pound early in 1980 to $1.25 per pound by the end of the year.

World Production of Magnesium (Primary) In Short Tons

Year	Canada	France	India	Italy	Japan	China	Norway	Japan	U.S.S.R.	Un. Kingdom	United States	World Total[1]
1968	9,928	4,938		7,273	6,236	1,100	34,487		46,000	3,968	98,375	212,305
1969	10,637	4,866		7,093	10,342	1,100	34,333		50,000	3,211	99,887	221,469
1970	10,353	5,083		8,356	11,395	1,100	38,959		55,000	3,038	112,007	242,253
1971	7,234	7,954		8,496	10,685	1,100	39,799	10,685	57,000	3,100	123,485	255,753
1972	5,924	7,550		8,335	12,004	1,100	40,149	12,004	60,000		120,823	255,960
1973	6,840	9,511		9,850	12,349	1,100	41,360	12,349	63,000		122,431	266,441
1974	6,535	7,199		8,191	9,836	1,100	43,866	9,836	66,000		N.A.	142,727
1975	4,217	8,303		6,993	9,412	1,100	42,259	9,412	66,000			138,284
1976	6,715	8,825	33	9,740	12,335	1,100	42,778	12,335	69,000		119,957	270,483
1977	8,414	9,571	118	9,663	10,379	1,100	42,070	10,379	71,000		125,058	277,373
1978[2]	9,160	9,370	25	10,688	12,303	1,100	43,155	12,303	77,000		149,462	312,263
1979[1]	10,110	10,000	50	9,500	12,531	1,100	50,000	12,531	79,000		162,291	334,582
1980[1]	10,000	10,000		10,000	13,000	1,000	55,000	13,000	83,000		170,000	352,000
1981												

[1] Estimate. [2] Preliminary. *Source: Bureau of Mines*

Salient Statistics of Magnesium in the United States In Short Tons

	Production							$	Domestic Consumption of Primary Magnesium				
		Secondary							Structural Products				
Year	Primary (Ingot)	New Scrap	Old Scrap	Total	Exports[2]	Imports for Consumption	Stocks Dec. 31[3]	Price per Pound[4]	Castings	Wrought	Total	Other Uses[5]	Total
1968	98,375	12,056	3,469	15,525	19,457	4,808	9,940	.35¼	11,684	11,280	22,964	63,463	86,427
1969	99,887	10,479	2,991	13,470	27,372	4,316	12,572	.35¼	10,450	13,110	23,560	71,572	95,132
1970	112,006	9,262	2,780	12,042	35,732	3,295	12,696	.35¼	10,997	12,250	23,247	70,248	93,495
1971	123,485	11,560	3,143	14,703	24,311	3,671	13,021	.36¼	8,376	10,717	19,093	73,073	92,166
1972	120,823	12,639	2,989	15,628	17,556	4,479	23,011	.37¼	10,762	12,947	23,709	79,982	103,691
1973	122,431	13,535	4,101	17,636	39,585	3,325	18,894	.37¼	12,137	12,965	25,102	90,672	115,774
1974	N.A.	9,155	5,719	14,874	46,398	5,305	23,000	41¼-.75	14,176	13,348	27,524	102,524	130,048
1975	120.203	18,090	9,783	27,873	32,591	7,903	19,664	.82	9,488	9,666	19,154	75,013	94,167
1976	119,957	19,024	11,529	30,553	13,444	14,907	17,295	.87-.92	7,051	10,241	17,292	87,161	104,453
1977	125,958	20,170	12,524	32,694	28,061	5,964	11,838	.96-.99	7,201	12,632	19,833	83,743	103,576
1978	149,507	22,135	14,093	36,228	41,807	6,668	12,583	.99-1.01	7,651	11,075	18,726	90,232	108,958
1979[6]	162,291	18,316	13,882	37,222	54,275	4,754	13,901	.99-1.09	7,460	11,562	19,022	89,822	108,844
1980[1]	170,000			40,000	56,760	3,756		1.09-1¼					110,000
1981													

[1] Estimate. [2] Metal & alloys in crude form, & scrap. [3] Producers' & consumers' stocks of primary magnesium. Gov't. agencies continue to hold quantities of primary magnesium. [4] Magnesium ingots (99.8%) f.o.b. Valasco, Texas. [5] Distributive or sacrificial purposes. [6] Preliminary. *Source: Bureau of Mines*

Manganese

There was no manganese ore, concentrate, or nodules, containing 35 percent or more manganese, produced or shipped in the United States in 1980. U.S. demand, for the most part, is met by imports of ore, alloy and metal, augmented by the release of excesses from Government stockpiles and by supply from industry stocks. Manganese is essential for the production of virtually all steels, its principal use. There are no satisfactory substitutes for this purpose.

U.S. imports of manganese ore in 1980 amounted to nearly 693,000 tons, 38 percent more than in 1979, while ferromanganese imports (in terms of ore) amounted to about 1,214,000 tons, 26 percent smaller than in 1979. Manganese is used by the steel industry chiefly in the form of ferromanganese or silicomanganese. Virtually all of the manganese metal imports are from the Republic of South Africa. The U.S. import sources (1976–1979) for manganese ore (typically 35 to 54 percent manganese content) were Gabon—44 percent; Brazil—24 percent; Australia—13 percent; Republic of South Africa—9 percent. U.S. import sources for ferromanganese in the 1976–1979 period were: Republic of South Africa—38 percent; France—22 percent; Japan—7 percent; others—33 percent.

U.S. consumption of magnese ore, as well as both production and consumption of ferromanganese were lower in 1980 than in the previous year, with apparent consumption of manganese about 6 percent below that of 1979. Ultimate major end uses were: transportation—24 percent; construction—23 percent; machinery—17 percent; others—36 percent.

Effective, May 2, 1980, new stockpile goals were set by the Federal Emergency Management Agency for manganese, including a goal of 2,700 tons for metallurgical ore.

World Production of Manganese Ore In Thousands of Short Tons

Year	Hungary	Zaire (Congo)	Brazil	Chile	China	Gabon	Morocco	Ghana[3]	India	Japan	Australia	South Africa	USSR	Mexico	World Total
% Mn	30–33	30–57	38–50	36–40	20+	50–53	53–50	30–50	10–54	26–28	37–53	30–48+	35	35+	
1968		354.7	1,842	26.3	990	1,383	176.6	455.6	1,766	344.2	820	2,173	7,236		18,628
1969		343.3	2,217	26.1	1,100	1,536	143.9	366.8	1,638	331.6	981	2,430	7,221		19,230
1970		382.4	2,071	29.5	1,100	1,602	123.9	446.8	1,820	298.1	828	2,954	7,541	301.9	20,084
1971		362.7	2,868	31.8	1,100	2,057	111.8	659.8	2,029	314.2	1,158	3,568	8,067	294.2	23,178
1972		407.3	2,268	17.7	1,100	2,135	105.9	549.3	1,810	287.4	1,284	3,606	8,619	325.9	22,948
1973		368.1	1,780	15.9	1,100	2,115	161.1	350.8	1,641	208.0	1,678	4,603	9,089	401.3	23,970
1974		317.2	1,972	31.6	1,100	2,275	192.7	275.9	1,656	183.6	1,678	5,231	8,989	444.4	24,751
1975		340.1	2,377	22.1	1,100	2,475	144.3	450.6	1,738	174.1	1,714	6,359	9,324	472.3	27,175
1976	138.0	200.8	1,870	26.1	1,100	2,444	129.3	343.8	2,023	156.2	2,375	6,010	9,520	499.6	27.172
1977	132.0	42.2	1,671	19.8	1,100	2,040	125.2	321.4	2,056	138.9	1,531	5,564	9,470	536.4	25,154
1978[1]	126.0	—	1,800	25.6	1,400	1,831	139.1	347.9	1,727	118.5	1,422	4,759	9,984	576.7	24,622
1979[1]	115.0	—	1,875	25.0	1,650	2,000	150.0	300.0	1,800	100.0	1,836	5,713	10,500	600.0	26,963
1980[2]			1,600		1,000	1,800			1,700			5,000	11,000		25,300

[1] Preliminary. [2] Estimated. [3] Dry weight. *Source: Bureau of Mines*

Salient Statistics of Manganese in the United States In Thousands of Short Tons (Gross Weight)

		Manganese Ore (35% or More Mn)							Ferromanganese							
		Mine Shipments—Ore											Manganiferous Ore[3]		Spiegelesien	
Year	Net Import Reliance as a % of Apparent Consumption	Metallurgical	Battery	Misc.	Total	General Imports	Consumption	Stocks, Dec. 31[2]	Domes. Production	Imports for Consumption	Exports	Consumption	Production	Value Mil. $[4]	Stocks Dec. 31[2]	Consumption
1968		10.5	.8	—	11.4	1,828	2,228	1,801	880.0	203.2	3.7	1,017	244.6	2.4	38.4	28.1
1969		5.6	—	—	5.6	1,960	2,181	1,805	852.0	307.9	1.8	1,071	430.6	3.5	15.1	21.8
1970		4.7	—	—	4.7	1,735	2,364	1,768	835.5	290.9	21.7	1,001	368.3	2.8	10.4	20.3
1971		.1	—	—	.1	1,914	2,155	2,010	759.9	242.8	4.5	899	198.3	1.5	12.5	19.7
1972		.6	—	—	.6	1,620	2,331	1,795	800.7	348.5	6.8	968	147.2	1.0	13.2	19.6
1973		.2	—	—	.2	1,510	2,140	1,543	683.1	390.6	8.6	1,117	203.1	1.5	3.7	21.6
1974					—	1,225	1,880	1,841	544.4	421.2	7.0	1,115	272.9	2.3	3.1	18.1
1975	98				—	1,574	1,819	2,064	575.8	397.2	32.3	882	159.2	1.4	5.2	14.2
1976	98				—	1,317	1,601	2,256	482.7	537.4	6.8	897	256.6	2.3	8.1	8.4
1977	98				—	931	1,359	1,626	334.1	534.4	6.1	886	215.9	2.2	.1	6.8
1978	97				—	548	1,281	1,174	272.5	680.4	9.4	986	312.1	3.1	.1	4.0
1979[1]	98				—	500	1,372	1,098	317.1	821.2	25.3	976.5	240.7	2.9	.1	3
1980[5]	97					693	983	833	216.0	607.0	11.7	772			—	3

[1] Preliminary. [2] Including bonded warehouses; excludes Gov't stocks; also excludes small tonnages of dealers' stocks. [3] 5 to 35% Mn. [4] Combined value for total Manganese ore & Manganiferous ores. [5] Estimate.
Source: Bureau of Mines

MANGANESE

Manganese Ore (35% or More Mn) Imported[2] into the U.S. In Thousands of Short Tons (Mn Content)

Year	Angola	Zaire	Brazil	Congo (Brazz.)	Guyana	Ghana	India	Mexico	Morocco	Gabon	Australia	Turkey	South Africa	Total	Value Mill. $
1971	27.6	52.8	334.9	—	—	37.8	1.3	13.0	12.7	305.6	52.6	3.8	87.4	938	42.2
1972	17.2	142.0	192.8	16.8	—	22.1	12.4	32.7	13.9	236.8	40.3	—	65.7	793	34.3
1973	—	35.7	299.4	—	—	18.6	—	41.2	13.9	196.1	61.5	—	55.9	723	37.4
1974	—	25.3	222.0	—	—	4.5	—	16.4	27.5	150.1	114.0	—	32.9	593	45.1
1975	—	11.4	307.4	—	—	—	—	23.2	—	244.8	86.5	—	92.2	766	77.1
1976	—	2.9	161.1	13.3	—	—	—	18.5	18.7	256.4	117.4	—	61.0	649	73.6
1977	—	14.7	111.6	—	—	—	—	34.9	17.1	245.2	13.8	—	16.9	454	56.4
1978	—	13.2	52.1	9.5	—	—	—	18.4	14.5	127.0	32.6	—	11.0	278.2	33.6
1979[1]	—	—	51.7	22.5	—	—	—	2.1	10.7	49.2	55.3	—	52.1	243.6	27.5
1980[1]			33.6					22.4	2.8	79.9	106.0		86.4	331.2	

[1] Preliminary. [2] Imported for consumption. *Source: Dept. of Commerce*

United States General Imports[1] of Manganese Ore In Thousands of Long Tons—Manganese Content

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1971	54	49	74	93	93	114	143	119	99	40	41	102	1,019
1972	104	92	87	65	52	72	78	97	88	90	74	50	934
1973	106	72	52	101	99	58	85	72	51	127	41	51	916
1974	56	41	81	27	57	76	61	50	94	92	103	112	851
1975	79	40	108	138	116	84	77	88	51	112	43	98	1,033
1976	101	39	83	68	53	161	45	134	87	75	93	114	1,053
1977	70	53	29	48	121	119	62	87	110	49	21	64	834
1978	94	50	113	49	71	55	82	42	97	62	64	63	842
1979	62	50	60	57	85	122	61	34	85	53	105	76	850
1980	109	56	54	66	97	68	54	67	60	38	57	69	795

[1] General imports of ore, concentrates manganiferous ore, manganese alloys & metals. *Source: Department of Commerce*

Average Price of Ferromanganese[1] (78% Mn-F.O.B. Plant) In Dollars Per Gross Ton—Carloads

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1971	190	190	190	190	190	190	190	190	190	190	190	190	190.00
1972	190	190	190	190	190	190	190	190	190	190	190	190	190.00
1973	200	200	200	200	200	200	200	200	200	200	200	200	200.00
1974	200	200	200	270	270	294¾	315	333⅓	350	350	350	440	297.76
1975	440	440	440	440	440	440	440	440	440	440	440	440	440.00
1976	432½	432½	432½	432½	432½	432½	432½	432½	432½	432½	425	417½	430.63
1977	417½	417½	417½	399½	399½	399½	399½	399½	399½	399½	399½	399½	404.00
1978	399½	399½	399½	399½	422.17	425	425	425	425	425	425	425	416.26
1979	440	440	440	465	490	490	490	490	490	493.48	510	510	479.04
1980	500.85	500.85	500.85	500.85	500.85	500	479.18	479.18	479.18				

[1] Domestic standard. *Source: American Metal Mkt.; Bureau of Labor Statistics* (1016–0111.04)

Production of Ferromanganese in U.S., & Materials Used in Its Manufacture

Year	Ferromanganese Produced			Silico-Manganese (Gr. Wt.) Sh. Tns.	Materials Consumed (Short tons)			
		Manganese Contained			Manganese Ore		Manganese Ore Used Per Ton of Ferro-manganese & Silico-manganese	Ferro-manganese Made
	Short Tons	Per Cent	Short Tons		Foreign	Domestic		
1970	835,463	78.5	655,436		2,098,210	1,216	2.0	2.4
1971	759,896	78.6	597,205	165,000	1,820,408	7,033	1.9	2.4
1972	800,723	78.3	627,358	153,000	1,896,483	25,620	2.0	2.3
1973	683,075	78.8	538,119	184,000	1,648,806	25,912	1.9	2.4
1974	544,361	78.0	424,405	196,000	1,348,425	55,822	1.8	2.5
1975	575,809	78.9	454,309	143,000	1,389,300	48,011	1.9	2.4
1976	482,662	79.0	381,328	129,000	1,208,336	53,632	2.0	2.5
1977	334,134	78.8	263,136	120,000	889,296	35,769	1.9	2.6
1978	272,530	80.6	219,707	142,000	740,906	90,660	1.9	
1979[1]	317,102	80.2	254,389	165,000	785,664	125,130	1.8	
1980[1]	216,029							

[1] Preliminary. *Source: Bureau of Mines*

Margarine

Salient Statistics of Margarine in the United States In Million Pounds (Actual Weight)

				Domestic Disappearance[2]		Materials Used in Manufacture of Margarine								
Year	Stocks Jan. 1	Production	Exports & Shipments	Total	Per Person in lbs.	Coconut Oil	Cottonseed Oil	Soybean Oil	Peanut Oil	Corn Oil	Lard & Beef Fats	Safflower Oil	All Other Edible Oil	Total Primary & Secondary Fats & Oils
1971	46	2,290	13	2,264	11.1	7	63	1,385	—	186	169	19	2	1,831
1972	57	2,364	13	2,338	11.3	6	65	1,461	—	194	138	20	2	1,886
1973	69	2,359	13	2,350	11.3	4	63	1,491	—	213	80	32	8	1,891
1974	61	2,398	15	2,370	11.3	9	58	1,457	—	188	167	16	9	1,904
1975	64	2,399	17	2,375	11.2	20	46	1,568	1	188	52	7	38	1,920
1976	60	2,628	20	2,595	12.2	4	51	1,671	38	218	44	10	58	2,094
1977	67	2,535	20	2,508	11.6	5	44	1,584	15	243	80	8	48	1,960
1978	80	2,520	32	2,494	11.4	7	42	1,593	—	211	74	10	27	1,930
1979[1]	70	2,553	19	2,524	11.5	4	45	1,643	—	222	86	5	12	1,981
1980[1]	81	2,593												

[1] Preliminary. [2] Civilian & military. *Source: Bureau of Census*

United States Production of Margarine In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1971	212.9	189.0	195.9	181.0	176.4	185.9	163.4	173.3	194.7	188.2	210.1	219.4	2,290
1972	207.9	194.9	202.0	181.5	186.5	186.3	164.4	194.7	197.3	203.8	216.1	228.7	2,364
1973	232.6	191.7	198.7	184.4	200.3	168.5	151.8	187.7	185.8	224.2	218.2	215.1	2,359
1974	248.1	205.7	213.4	194.8	202.9	174.4	192.0	163.2	182.2	229.5	203.9	187.6	2,398
1975	211.0	201.2	198.7	181.7	183.0	180.6	173.7	178.7	216.6	212.8	219.7	241.6	2,399
1976	265.1	259.6	225.8	198.8	190.5	199.8	197.4	195.1	202.8	214.3	233.2	246.0	2,628
1977	242.3	236.5	232.7	197.3	178.8	179.8	164.8	198.2	209.1	221.8	229.0	244.7	2,535
1978	219.8	224.6	243.0	186.8	183.7	194.6	166.0	200.6	207.6	222.2	220.6	250.0	2,520
1979[1]	233.1	214.8	242.9	186.8	197.5	193.0	188.3	199.0	205.9	225.8	224.6	241.5	2,553
1980[1]	235.8	228.7	231.6	184.5	200.5	214.6	192.1	186.9	213.2	221.9	218.4	264.6	2,593
1981[1]	234.8												

[1] Preliminary. *Source: Bureau of the Census*

Stocks[1] of Margarine in the United States In Millions of Pounds

Year	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1972	57.1	68.9	71.4	69.1	82.6	83.9	67.1	68.4	71.0	68.9	69.8	67.7
1973	69.3	80.6	80.2	70.1	66.6	68.2	69.7	57.4	47.1	58.4	60.2	59.3
1974	61.2	55.3	63.0	74.4	75.2	80.3	77.8	70.8	69.0	71.8	74.1	70.0
1975	64.3	65.6	72.5	65.8	75.8	64.4	63.6	66.6	52.6	58.6	60.2	64.8
1976	60.1	66.9	82.1	101.1	70.2	71.4	70.8	73.6	80.0	72.4	72.2	69.8
1977	67.2	67.4	70.7	71.8	77.3	91.0	81.0	73.7	68.6	58.9	74.0	70.0
1978	79.9	61.8	70.3	59.3	72.3	63.4	68.8	67.8	60.3	66.0	69.9	58.9
1979[2]	69.5	66.8	82.1	67.5	77.3	75.2	78.3	68.7	77.1	72.7	81.6	64.9
1980[2]	80.5	71.6	80.0	73.2	69.5	62.5	74.7	78.3	60.7	66.1	80.0	71.4
1981[2]	74.2	62.3										

[1] Producers' and warehouse. [2] Preliminary. *Source: Bureau of the Census*

Average Wholesale Price of Margarine, Yellow, Quarters, F.O.B. Chicago[1] In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1971	19.5	19.5	19.5	19.5	19.5	19.8	21.5	23.0	23.0	23.0	23.5	23.5	21.2
1972	22.8	22.5	22.5	22.5	22.5	22.5	21.8	21.2	21.0	21.0	21.0	21.0	21.8
1973	21.0	23.1	25.0	25.5	25.9	27.5	27.9	41.7	34.1	36.9	37.0	37.0	30.2
1974	38.5	40.8	43.3	42.5	40.4	39.8	44.3	53.3	46.5	49.6	48.5	44.4	44.3
1975	41.8	41.5	39.3	41.5	39.5	39.3	39.2	38.1	36.0	34.3	33.5	31.3	37.9
1976[1]	31.0	31.0	31.0	31.0	30.7	30.0	31.8	30.0	32.0	32.0	33.0	33.0	31.4
1977	33.8	34.0	39.5	42.5	44.3	43.9	42.4	40.3	38.5	37.4	36.9	36.1	39.1
1978	36.6	36.7	41.0	43.6	42.0	40.6	37.8	37.3	41.6	41.3	40.1	39.6	39.8
1979	40.3	41.3	42.3	41.4	40.6	41.1	42.6	42.3	43.9	42.4	37.9	42.1	41.5
1980	39.8	38.8	39.0	35.6	34.8	36.1	40.3	40.0	40.3	39.3	40.3	40.2	38.7

[1] Prices prior to 1976 are for WHITE (DOMESTIC VEGETABLE). *Source: Department of Agriculture*

Meats

Total U.S. red meat production in 1980 rose 4 percent from 1979 output to 39.0 billion pounds, of which 36.6 billion pounds was federally inspected. Beef accounted for 21.6 billion pounds, up 1 percent from 1979. Of the beef graded in calendar year 1980 (56.1 percent of commercial production), 89 percent graded Choice. Yield grade No. 3 accounted for 58.4 percent and yield-grade 2 for 28.9 percent of the total beef graded, according to USDA data. Pork production increased 8 percent in 1980 to 16.6 billion pounds. Veal production dropped 8 percent to 400 million pounds. Lamb and mutton production rose to 318 million pounds, 9 percent above the 1979 level.

Total red meat and poultry consumption in the U.S. (on a retail weight basis) was a record high 212 pounds per capita in 1980. Sharp increases in pork consumption more than offset a reduction in beef and veal use. Per capita beef consumption declined 2.0 pounds from the 1979 level to an estimated 105.6 pounds despite a slight increase in production, because of lower beef imports and a larger population. Per capita consumption of pork (total, including farm production) amounted to 75.1 pounds, up more than 4 pounds from 1979. Poultry consumption per person increased by less than 0.5 pound in 1980.

Red meats accounted for close to 71 percent of total U.S. meat consumption in 1980 and were expected to drop to below 70 percent in 1981. With poultry production rising in recent years, both broilers and turkeys have gained a larger share of total meat consumption. Poultry accounted for an estimated 29 percent of the meat consumed in 1980 and was expected to account for more than 30 percent in 1981. Pork consumption as a percent of total meats has fluctuated more than either beef or poultry in recent years. It accounted for almost 33% in 1980, but was expected to account for only about 30 percent of total meat consumed in 1981.

The impact of a decline in U.S. economic activity on the demand for meat in 1980 was lessened by record-large cost-of-living increases in Federal transfer payments. Demand for meat was expected to be helped again in 1981 by projected Federal transfer payment increases in the summer. However, consumer allocation of their incomes to various goods, services and savings was expected to be a major determinant of U.S. consumption of meat in 1981.

Futures Market

Imported lean beef futures are traded on the New York Mercantile Exchange.

World Total Meat[1] Production In Millions of Metric Tons

Year	Argentina	Australia	Bel.-& Lux.	Canada	Czechoslovakia	Denmark	France	W. Germany	Japan	Italy	N. Zealand	Poland	Brazil	South Africa	Un. Kingdom	United States	U.S.S.R
1969	3.4	1.9	.6	1.4	.7	.9	2.9	3.4	.7	1.4	1.0	1.5	2.5	.7	2.0	16.0	9.0
1970	3.1	1.9	.7	1.5	.7	.9	3.0	3.6	.9	1.4	1.0	1.5	2.6	.7	2.1	16.4	9.1
1971	2.5	2.2	.8	1.6	.7	1.0	3.2	3.8	1.0	1.4	.9	1.5	2.5	.8	2.2	17.1	9.8
1972	2.6	2.4	.8	1.5	.7	.9	3.0	3.6	1.1	1.8	1.0	1.6	2.8	.8	2.1	16.8	10.0
1973	2.6	2.3	.9	1.5	.8	1.0	3.0	3.4	1.1	1.9	1.0	1.8	3.3	.7	2.1	15.8	9.9
1974	2.6	1.9		1.6			3.4	3.8	1.2	2.0		2.0	2.9		2.3	17.1	10.5
1975	2.8	2.4	.9	1.6	.8	1.0	3.4	3.8	1.3	1.7	1.0	2.1	3.0	.8	2.3	16.7	11.0
1976	3.2	2.7	.9	1.7	.8	1.0	3.5	3.9	1.4	1.9	1.2	2.4	3.1	.8	2.1	18.1	10.0
1977	3.3	2.0	.7	1.7	.9	1.0	3.4	3.9	1.5	2.0	1.1	2.3	3.4	.8	2.2	18.0	12.7
1978	3.6	2.8	.9	1.7	.9	1.1	3.5	4.1	1.7	2.0	1.1	2.5	3.1	.8	2.2	17.5	13.3
1979	3.5	2.5	1.0	1.7	.0	1.2	3.7	4.2	1.8	2.1	1.1	2.6	3.1	.9	2.2	17.1	13.2
1980[2]	3.3	2.3	1.0	1.9	1.0	1.2	3.7	4.3	1.9	2.2	1.0	2.3	3.3	.9	2.2	17.7	12.7
1981[3]	3.2	2.1	1.0	1.9	1.0	1.2	3.6	4.3	1.9	2.2	1.1	2.3	3.5	.9	2.2	17.3	12.3

[1] Production of beef & veal, mutton & lamb, goat meat, & pork. Horsemeat included from 1976. [2] Preliminary. [3] Forecast.
Source: Foreign Agricultural Service, U.S.D.A.

World Per Capita Consumption of Meat[1] (Total Red Meat) In Kilograms

Year	Argentina	Australia	Austria	Canada	Denmark	France	W. Germany	Ireland	N. Zealand	Poland	Switzerland	United Kingdom	United States	Uruguay	U.S.S.R.
1968	103	95	58	72	57	63	61	53	111	42	56	62	83	97	37
1969	107	93	59	72	56	63	61	55	88	42	58	62	83	78	37
1970	96	94	60	73	61	63	63	59	93	42	60	63	85	89	38
1971	82	99	61	74	56	64	66	61	81	44	61	65	86	93	40
1972	74	101	63	73	58	64	67	63	102	47	65	64	88	88	41
1973	79	91	63	71	53	63	65	60	104	49	66	59	81	85	40
1974	87	100	65	73	51	65	67	64	98	74	64	58	87	100	44
1975	99	109	68	73	54	66	67	67	103	73	64	58	83	100	45
1976	101	110	70	79	60	68	69	64	100	67	66	55	89	89	40
1977	101	110	71	77	59	69	70	62	107	66	70	58	88	97	51
1978	106	104	72	74	67	72	73	63	105	69	70	59	85	103	51
1979[2]	103	88	74	71	68	74	74	63	101	69	70	59	83	81	51
1980[3]	103	86	75	70	69	76	75	63	96	70	71	59	83	92	49

[1] Summation of previous individual meat tables plus horse meat. [2] Preliminary. [3] Forecast.
Source: Foreign Agricultural Service, U.S.D.A.

Total Red Meat Imports (Carcass Weight Equivalent[2]) of Importing Countries In Thousands of Metric Tons

Year	Belgium & Lux.	Canada	Czechoslovakia	France	Germany East	Germany West	Greece	Italy	Japan	Netherlands	Spain	Switzerland	Un. Kingdom	United States	U.S.S.R.
1969	83.0	185.5	88.2	339.0	67.4	303.7	98.6	364.7	268.3	94.9	120.7	48.7	1,518	1,023	39.5
1970	79.8	169.4	108.2	331.7	86.7	375.0	114.5	427.2	252.5	88.8	108.5	55.4	1,425	1,105	105.0
1971	82.5	122.4	65.1	324.0	56.8	422.1	123.9	473.2	312.1	75.5	47.8	53.7	1,431	1,065	133.6
1972	94.5	168.3	36.8	427.2	53.7	603.8	103.1	512.9	422.1	114.5	167.6	56.7	1,524	1,212	87.9
1973	106.0	163.5	85.3	468.4	46.2	605.1	126.7	660.4	592.9	118.5	128.2	56.3	1,312	1,176	94.4
1974	87.3	130.5	41.6	422.3	15.0	563.0	34.3	550.6	394.2	105.0	25.8	33.0	1,059	981.3	455.7
1975	111.7	151.6	12.3	479.1	13.9	586.0	50.3	588.7	569.8	131.2	71.7	24.7	1,064	1,020	454.1
1976	120.5	249.4	22.0	482.2	15.3	614.0	95.0	593.0	692.7	150.0	101.9	26.1	1,132	1,184	274.6
1977	121.2	194.3	21.4	556.2	15.3	627.0	110.9	612.9	649.0	175.3	59.2	26.0	1,280	1,100	496.2
1978	143.9	172.9	21.0	630.4	15.3	633.0	142.0	632.1	665.4	187.5	112.3	33.8	1,276	1,296	132.0
1979	136.4	142.1	21.0	598.1	15.5	649.0	142.0	692.1	709.4	196.2	124.0	28.8	1,243	1,349	469.0
1980[1]	134.0	109.0	21.0	641.0	9.0	685.0	133.0	722.0	547.0	196.4	23.2	24.3	1,195	1,193	610.0
1981[3]	141.0	115.5	21.0	650.5		675.0	130.0	708.0	610.0	202.5	13.1	24.6	1,205	1,196	635.0
1982															

[1] Preliminary. [2] Excludes fat, offals & live animals. [3] Forecast. *Source: Foreign Agricultural Service, U.S.D.A.*

Total Red Meat Exports (Carcass Weight Equivalent[2]) of Principal Countries In Thousands of Metric Tons

Year	Argentina	Australia	Brazil	Canada	Denmark	France	Ireland	Mexico	Netherlands	N. Zealand	Poland	United States	U.S.S.R.	Uruguay	Yugoslavia
1969	909.5	694.7	128.5	65.3	608.3	155.0	223.3	58.3	395.5	734.7	195.2	88.3	122.5	128.9	130.9
1970	859.5	786.4	145.6	94.7	613.1	157.0	230.0	61.5	485.5	710.7	175.0	51.2	75.5	162.0	119.2
1971	556.8	926.6	187.6	102.7	683.7	212.3	256.5	55.9	511.2	731.2	189.3	59.8	60.7	102.1	120.7
1972	771.0	1,137	267.7	102.6	654.8	178.7	226.9	64.1	499.7	736.9	188.7	82.9	82.0	148.4	121.4
1973	600.2	1,132	225.5	112.5	647.0	200.5	227.8	48.2	555.6	723.8	216.2	140.9	98.5	111.8	106.1
1974	357.7	6,106	154.0	81.5	690.4	337.0	300.2	27.3	589.5	620.3	153.6	109.0	79.1	123.4	59.1
1975	329.5	943.0	156.2	78.2	700.2	374.8	359.7	17.6	610.9	708.2	161.7	164.0	63.5	124.1	86.8
1976	628.6	1,129	217.0	112.2	634.1	366.8	282.9	28.5	641.0	788.6	117.7	236.4	67.6	201.8	98.5
1977	669.6	1,335	240.0	112.1	695.6	312.2	363.8	34.1	697.2	790.9	131.8	236.0	49.2	134.6	88.0
1978	823.7	1,377	178.1	117.1	753.4	267.2	359.3	46.6	751.6	724.7	141.0	256.6	38.0	118.8	113.4
1979	772.8	1,307	152.3	148.7	832.3	306.4	343.9	6.2	797.8	779.0	156.1	264.1	33.0	84.7	82.4
1980[1]	516.5	1,150	201.9	199.0	879.6	322.4	419.0	2.4	802.5	775.1	160.0	243.5	30.0	104.9	79.2
1981[3]	473.5	1,023	216.9	201.5	893.3	322.5	350.0	8.6	814.0	768.3	134.0	255.4	30.0	116.0	78.6
1982															

[1] Preliminary. [2] Excludes fat, offals & live animals. [3] Forecast. *Source: Foreign Agricultural Service, U.S.D.A.*

United States Exports of Livestock & Meat Products In Thousands of Metric Tons[5]

	Red Meats						Byproducts					Live Animals (1,000 Head)			
Year	Beef & Veal	Pork	Lamb, Mutton & Goat	Sausage, Bol. & Frank.	Other Meats[2]	Total	Variety Meats[3]	Saus. Casings (Animal)	Lard	Tallow & Greases	Cattle Parts[4]	Cattle & Calves	Sheep & Lambs	Hogs	Horses, Mules, Etc.
1968	27.0	85.1	1.9	4.3	12.8	131.1	225.2	10.5	195.3	2,245	36.0	35.7	117.7	13.7	15.0
1969	25.7	145.1	1.4	4.7	13.0	190.0	239.8	11.9	261.9	1,908	29.9	39.2	106.2	18.6	11.5
1970	29.3	61.2	1.1	4.1	12.0	107.7	239.5	12.3	365.9	2,261	14.4	88.0	132.9	24.8	40.7
1971	42.0	65.3	1.3	4.0	12.4	125.0	277.5	12.3	282.3	2,616	28.4	93.0	213.8	17.3	14.5
1972	52.2	99.3	1.3	4.0	12.1	168.8	254.1	13.6	164.4	2,368	27.0	103.9	159.4	12.3	21.2
1973	79.1	160.7	1.7	5.6	15.8	263.0	281.9	14.8	113.3	2,319	31.2	272.6	204.3	16.8	71.5
1974[5]	23.0	42.9	1.2	2.4	9.0	78.4	134.2	5.6	73.2	1,218	37.8	204.4	290.7	15.8	66.4
1975	20.7	91.2	1.3	2.2	5.7	121.0	133.2	5.8	39.8	916.0	13.8	195.9	339.2	16.0	36.4
1976	36.6	137.5	1.4	2.5	7.7	185.6	172.2	6.9	81.9	1,076	10.5	204.5	244.5	10.8	37.8
1977	41.5	125.2	1.8	3.4	8.2	180.0	173.1	6.9	82.6	1,319	10.5	107.0	205.1	10.2	23.0
1978	55.0	100.2	1.4	3.7	6.8	167.0	185.8	7.1	54.2	1,228	19.4	122.2	141.8	12.7	79.4
1979	57.4	97.4	.6	3.0	4.7	163.0	168.9	7.2	43.5	1,286	21.6	66.2	125.4	13.4	29.1
1980[1]	59.5	84.2	.6	3.3	7.4	155.0	200.4	7.6	41.9	1,516	17.5	65.6	123.5	16.3	65.6
1981															

[1] Preliminary. [2] Canned mainly. [3] Beef, Pork & other byproducts. [4] Excludes furskins. [5] Data prior to 1974 are in MILLIONS OF POUNDS. *Source: Foreign Agricultural Service, U.S.D.A.*

MEATS

Production and Consumption of Red Meats in the United States *(Carcass Weight)*

Year	Beef			Veal			Lamb & Mutton			Pork (Excluding Lard)			All Meats		
	Production	Consumption Total	Consumption Per Capita	Production	Consumption Total	Consumption Per Capita	Production	Consumption Total	Consumption Per Capita	Production	Consumption Total	Consumption Per Capita	Production	Consumption Total	Consumption Per Capita
	Mil. Lbs.	Mil. Lbs.	Lb.	Mil. Lbs.	Mil. Lbs.	Lb.	Mil. Lbs.	Mil. Lbs.	Lb.	Mil. Lbs.	Mil. Lbs.	Lb.	Mil. Lbs.	Mil. Lbs.	Lb.
1969	21,158	22,065	110.8	673	654	3.3	550	687	3.4	14,245	14,224	71.4	36,626	37,630	188.9
1970	21,685	22,926	113.7	588	581	2.9	551	657	3.3	14,699	14,661	72.7	37,523	38,825	192.6
1971	21,902	23,084	113.0	546	545	2.7	555	645	3.1	16,006	16,127	79.0	39,009	40,401	197.8
1972	22,419	23,962	116.1	459	465	2.2	543	684	3.3	14,422	14,712	71.3	37,843	39,823	192.9
1973	21,277	22,812	109.6	357	376	1.8	514	557	2.7	13,223	13,298	63.9	35,371	37,044	178.0
1974	23,138	24,489	116.8	486	493	2.3	465	483	2.3	14,331	14,493	69.1	38,420	39,958	190.5
1975	23,976	25,398	120.1	873	876	4.2	410	430	2.0	11,779	11,852	56.1	32,038	38,556	182.4
1976	25,969	27,549	129.3	853	854	4.0	371	396	1.9	12,688	12,668	59.5	39,881	41,467	194.7
1977	25,279	27,038	125.9	834	836	3.9	351	371	1.7	13,247	13,200	61.5	39,711	41,445	193.0
1978	24,242	25,999	120.0	632	646	3.0	309	342	1.6	13,393	13,293	61.5	38,576	40,280	186.1
1979[1]	21,446	23,521	107.6	434	447	2.0	293	334	1.5	15,450	15,353	70.2	37,623	39,656	181.3
1980[2]	21,500	23,000	105.6	400	390	1.8	350	328	1.6	16,400	16,000	75.1	38,500	40,000	182.0
1981															

[1] Preliminary. [2] Estimate. *Source: Economic Research Service, U.S.D.A.*

U.S. Imports of Meats and Meat Preparations In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1969	65	88	198	149	134	139	163	188	174	165	106	122	1,685
1970	173	155	175	143	112	148	171	167	167	155	134	143	1,844
1971	133	112	151	141	133	170	155	166	223	110	102	188	1,789
1972	161	140	138	159	161	152	166	216	206	202	174	138	2,012
1973	165	148	133	149	166	143	153	209	159	207	184	156	1,972
1974	171	137	168	142	126	124	102	141	130	114	134	146	1,634
1975	179	131	145	125	111	135	148	149	157	135	168	112	1,694
1976	175	117	173	158	170	187	159	151	178	170	134	94	1,868
1977	131	150	143	147	147	130	147	158	167	117	87	212	1,741
1978	138	155	183	202	181	167	161	137	182	184	201	181	2,072
1979	201	184	214	201	190	214	168	141	142	143	188	193	2,178
1980	196	152	166	134	173	154	208	170	133	207	167	191	2,050
1981	171												

Source: Dept. of Commerce

United States Imports of Livestock & Meat Products In Thousands of Metric Tons[2]

Year	Red Meats						Meat for Animal Food	Byproducts				Live Animals (1,000 Head)			
	Beef, Boneless	Canned Corned	Pork	Lamb	Mutton & Goat	Total		Variety Meats	Lard	Tallow & Greases	Meat Extract	Cattle & Calves	Sheep & Lambs	Hogs	Horses, Mules, Etc.
1969	984.6	94.7	315.5	43.9	54.2	1,653		5.6	—	12.7	.9	1,042	22.8	13.4	3.5
1970	1,083	88.5	347.6	43.5	39.5	1,810		9.8	—	8.4	1.2	1,168	11.7	67.8	3.7
1971	1,057	67.1	356.5	38.2	32.3	1,760		6.5	.5	6.1	1.2	991	5.5	77.5	3.7
1972	1,251	80.1	394.7	37.3	55.6	1,990	55.8	7.9	.3	5.7	.9	1,187	13.8	89.0	3.2
1973	1,292	69.9	398.5	27.3	13.0	1,954	41.9	7.2	—	15.1	1.5	1,039	9.5	87.6	3.3
1974[2]	469.0	30.4	164.2	8.1	1.8	733.6	8.3	2.7	.1	7.2	.3	568	.9	196.3	3.7
1975	533.4	24.0	148.4	11.2	.5	762.8	8.0	2.5	—	8.0	.2	389	3.5	29.8	9.2
1976	560.2	45.3	144.0	15.5	.4	838.4	3.7	2.4	—	4.8	.4	984	4.6	45.6	10.0
1977	541.0	34.1	135.3	9.5	.3	784.0	1.4	2.6	0	3.1	.3	1,133	8.5	43.0	11.3
1978	651.1	37.6	157.3	17.2	.2	931.7	1.7	2.5	.1	2.4	.5	1,253	11.2	202.4	19.0
1979	685.5	34.6	163.8	19.4	.4	978.9	1.8	4.7	—	1.1	.6	732	9.5	136.6	16.2
1980[1]	622.6	34.5	196.6	15.0	.4	923.1		4.6	—	2.2	.1	681	20.5	247.3	15.9
1981															

[1] Preliminary. [2] Data prior to 1974 are in MILLIONS OF POUNDS. *Source: Foreign Agricultural Service, U.S.D.A.*

U.S. Exports of Meat and Meat Preparations In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1968	38	27	32	37	34	32	34	45	55	48	62	54	508
1969	29	35	57	54	62	45	46	40	47	62	51	43	571
1970	31	32	33	37	42	41	31	43	53	49	74	51	518
1971	39	41	49	35	46	43	39	51	48	39	43	69	547
1972	40	37	44	45	64	58	48	49	47	67	57	57	614
1973	48	52	81	75	74	66	49	57	53	72	62	70	759
1974	58	51	60	56	51	54	68	64	58	77	64	54	714
1975	57	67	75	65	79	64	70	77	73	76	79	82	864
1976	85	93	114	99	119	109	90	112	110	130	117	128	1,305
1977	100	100	103	113	110	103	112	110	125	106	109	124	1,315
1978	109	101	115	108	108	99	93	119	131	124	119	111	1,338
1979	102	95	117	99	100	124	103	109	119	135	119	155	1,378
1980	101	108	144	132	139	164	145	129	136	165	144	154	1,661
1981	143												

Source: Dept. of Commerce

Average Wholesale Prices of Meats In Cents Per Pound

Year	Composite Retail Price			Steer Beef Carcass, Choice, Chicago	Fresh Beef, Steer Carcasses Choice, E. Coast	Veal[5] Choice 90-150 Lb. N.Y.	Lamb Carcasses Choice & Prim. (35-45 Lb.) East Coast[6]	Fresh Loins, (8-14 lbs.) N.Y.	Hams[2] Fancy Skinned, Smoked	Picnics[7] (Smoked) 4-8 Lb.[1]	Live Broilers Georgia
	of Beef (Choice)	of Pork[4]	of Lamb (Choice)								
1968	88.7	66.8	92.9	43.82	47.3	67.86	55.36	50.90	53.7	42.96	13.1
1969	98.6	73.6	100.7	47.73	49.2	72.37	60.47	57.47	58.0	47.64	14.0
1970	101.7	77.4	105.5	47.33	49.0	83.53	59.13	56.86	54.2	48.40	12.3
1971	108.1	69.8	109.7	52.67	54.7	85.77	60.71	49.85	53.4	32.31	12.8
1972	118.7	82.7	118.8	55.63	57.6	97.06	65.21	64.46	62.6	40.47	13.1
1973	142.1	109.2	134.3	67.62	69.6	115.25	74.30	81.91	81.0	55.51	23.9
1974	146.3	107.8	146.4	73.12	69.1	105.54	83.33	78.56	67.8	47.95	21.1
1975	154.8	134.6	167.6	73.18	75.4	87.80	95.07	99.28	88.2	60.31	26.9
1976	148.2	134.0	185.6	61.00	64.4		102.67	97.68	85.5	61.35	24.0
1977	148.4	125.4	186.8	62.69	66.2		108.73	95.25	86.5	57.03	23.7
1978	181.9	143.6	219.6	80.43	83.9		127.20	109.15	90.0		26.0
1979[3]	226.3	144.1	245.7	101.62	101.1		134.50	107.6	80.6		26.0
1980[3]	237.6	139.5	252.7	101.44	104.4		135.02	101.1	81.3		27.3
1981											

[1] At N.Y. [2] Composite. [3] Preliminary. [4] Sold as retail cuts (ham, bacon, loin, etc.). [5] Skin off. [6] Prior to 1972—CHICAGO. [7] Prior to 1971 prices are for BACON. *Sources: Bureau of Labor Statistics; Department of Agriculture*

Average Wholesale Price of Steer Beef Carcass, Choice[1], at Midwest Markets[3] In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1968[2]	42.43	43.30	43.19	43.16[2]	42.96	43.28	44.58	44.61	44.45	43.62	44.50	45.75	43.82
1969	45.85	45.02	47.00	48.63	53.19	53.94	50.68	48.34	46.36	44.58	44.27	44.95	47.73
1970	46.89	46.74	49.34	48.78	47.18	48.02	50.26	48.86	47.38	45.91	44.86	43.79	47.33
1971	48.60	51.86	51.45	52.62	53.96	52.62	52.54	53.99	52.75	51.60	54.08	55.92	52.67
1972	57.52	57.58	54.92	53.72	56.45	59.36	58.69	54.56	53.36	52.95	51.26	57.20	55.63
1973	62.85	66.85	69.38	69.84	69.15	70.92	71.90	—	69.69	65.56	61.97	65.00	67.62
1974	75.56	75.78	67.62	65.84	66.13	62.18	84.92	77.95	79.66	75.62	72.96	73.25	73.12
1975[3]	61.36	58.41	59.50	70.20	80.60	85.76	82.82	77.95	79.66	75.62	72.98	73.25	73.18
1976	66.68	62.22	56.97	65.85	63.56	62.45	58.20	57.05	57.24	58.36	60.85	62.52	61.00
1977	60.04	58.92	57.12	60.54	64.44	62.62	63.65	62.49	63.04	65.87	65.47	68.10	62.69
1978	68.74	71.08	74.88	81.43	88.48	85.95	84.81	79.94	81.96	82.14	80.98	84.75	80.43
1979	93.57	97.47	104.59	108.61	108.64	103.56	99.85	94.13	101.91	98.32	103.22	105.53	101.62
1980	102.26	103.70	103.15	99.41	102.00	105.18	110.11	111.96	107.97	105.49	101.44	100.57	104.44
1981	99.80	96.10											
1982													

[1] 500–600 pounds. [2] Beginning Apr. 1968 prices are for 600–700 pounds. [3] Prior to Oct. 1975 prices are at CHICAGO.
Source: Department of Agriculture

MEATS

Production[2] (Commercial Slaughter[4]) of All Meats[1] in the U.S. In Millions of Pounds—Carcass Weight

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1968	2,816	2,494	2,581	2,689	2,855	2,482	2,661	2,738	2,738	3,132	2,770	2,760	32,717
1969	2,965	2,628	2,765	2,788	2,692	2,602	2,705	2,650	2,917	3,170	2,617	2,872	33,369
1970	2,891	2,535	2,820	2,919	2,738	2,770	2,770	2,731	3,031	3,196	2,951	3,221	34,574
1971	3,076	2,663	3,233	3,074	2,940	3,104	2,879	2,966	3,116	3,027	3,072	3,062	36,209
1972	2,861	2,744	3,193	2,859	3,097	2,996	2,581	3,082	2,968	3,228	3,130	2,893	35,632
1973[4]	3,176	2,722	2,979	2,579	3,051	2,799	2,651	2,704	2,635	3,225	3,079	2,894	34,495
1974	3,255	2,661	3,098	3,149	3,266	2,945	3,026	3,132	3,074	3,471	3,155	3,088	37,323
1975	3,315	2,880	2,959	3,089	2,873	2,832	2,842	2,860	3,088	3,339	2,978	3,159	36,213
1976	3,267	2.907	3,515	3,109	2,928	3,150	3,048	3,350	3,467	3,497	3,453	3,367	39,060
1977	3,238	3,084	3,549	3.200	3,122	3,298	2.925	3,405	3,354	3.344	3,416	3,241	39,172
1978[3]	3,214	3,044	3,341	3,079	3,268	3,078	2,882	3,272	3,138	3,353	3,345	3,094	38,119
1979[3]	3,281	2,756	3,090	2,879	3,130	2,990	2,958	3,329	2,876	3,556	3,306	3,074	37,225
1980[3]	3,393	3,050	3,099	3,310	3,314	3,090	3,065	3,020	3,221	3,577	3,100	3,346	38,584
1981[3]	3,416	3,011	3,383										

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[1] Except for pork production & lard. [2] Represents the total dressed carcass weight of livestock slaughtered under Federal inspection, exclusive of meats from condemned animals. [3] Preliminary. [4] Prior to 1973 data are for INSPECTED SLAUGHTER. *Source: Agricultural Marketing Service, U.S.D.A.*

Cold Storage Holdings of All[1] Meats in the United States, at End of Month In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1968	652.4	636.0	618.8	662.4	673.1	615.2	547.9	505.8	516.8	571.6	613.8	625.3
1969	595.3	601.0	616.5	677.9	634.2	555.5	512.6	513.1	549.9	612.2	635.2	637.3
1970	660.1	705.9	744.0	812.9	815.8	729.6	673.1	605.7	588.1	645.8	714.6	759.3
1971	769.8	745.2	789.1	866.1	897.4	890.8	831.7	771.6	775.3	768.1	756.0	795.8
1972	745.6	707.1	732.4	819.0	797.5	710.1	638.1	598.8	594.0	641.7	702.0	670.3
1973	681.9	661.5	687.0	706.7	697.6	675.3	588.5	505.4	525.0	643.3	770.0	829.7
1974	868.9	875.4	946.4	995.9	1,011.3	913.8	796.1	725.1	692.0	715.4	754.2	803.2
1975	809.4	793.9	787.4	801.1	725.6	654.0	578.2	518.4	517.5	571.3	667.6	675.2
1976	643.4	652.8	703.1	724.3	740.9	698.1	645.4	597.6	637.7	687.8	725.9	733.3
1977	745.4	759.6	776.4	823.0	802.4	723.4	629.4	568.6	579.0	532.1	565.2	566.6
1978	559.1	571.6	658.4	753.0	759.8	720.6	644.9	581.0	598.1	639.0	715.4	723.6
1979	728.4	710.9	762.5	783.4	797.0	755.0	685.6	580.7	549.1	604.5	656.9	706.2
1980[2]	735.3	712.6	695.4	714.1	706.5	641.8	578.6	514.3	504.9	582.2	681.0	749.6
1981[2]	791.7	782.9	774.0									
1982												

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[1] Includes beef and veal, mutton and lamb, pork and products, rendered pork fat, and miscellaneous meats. Excludes lard. [2] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

Stocks of Frozen Beef[1] in U.S. Cold Storage & Meat Packing Establishments In Millions of Pounds

Year	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1968	274.7	275.6	253.6	225.1	215.2	193.6	199.1	214.1	231.4	241.7	266.0	296.3
1969	296.5	281.2	271.0	274.6	266.6	247.0	230.9	238.9	266.9	304.0	334.5	333.2
1970	352.9	368.3	374.3	379.6	369.1	353.1	319.3	310.3	289.1	286.9	300.7	317.9
1971	338.4	325.7	308.4	302.1	290.3	285.1	296.7	312.2	333.2	351.1	347.2	326.9
1972	366.0	338.5	308.6	286.0	283.0	276.6	255.7	260.2	283.6	297.7	326.7	351.4
1973	367.1	382.8	368.9	359.3	360.1	335.6	322.4	298.1	253.6	244.5	315.3	392.6
1974	447.8	470.5	456.1	477.1	467.4	461.3	438.0	397.5	375.2	346.8	350.4	359.8
1975	401.9	407.1	385.9	384.6	349.0	308.6	288.1	269.0	258.2	254.4	272.4	320.0
1976	349.8	342.8	355.7	390.6	390.8	399.7	395.3	382.6	362.8	382.4	405.0	429.6
1977	453.5	474.6	475.4	472.9	472.0	447.4	412.6	374.0	350.1	345.8	301.1	291.5
1978	315.6	313.1	318.4	357.2	376.0	388.2	372.3	336.5	315.7	332.2	348.4	388.2
1979	405.4	423.7	405.0	427.4	410.1	411.9	395.7	369.6	324.2	296.7	308.2	321.9
1980[2]	350.3	367.3	357.6	335.1	296.1	276.9	256.5	242.6	228.6	219.4	243.3	280.1
1981[2]	328.2	362.1	347.9	342.9								
1982												

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[1] Includes frozen beef, cured beef, and beef in process of cure. [2] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

Mercury

U.S. production of primary mercury increased 3 percent in 1980, to 30,396 flasks (76 lbs. each), according to U.S. Department of the Interior, Bureau of Mines preliminary data. Production was reported by two mercury mines, one in Nevada and one in California. One gold mine in Nevada produced by-product mercury. Secondary production of mercury declined 8.5 percent in 1980, to 14,265 flasks, according to the Bureau of Mines.

Domestic consumption of mercury dropped 15 percent in 1980 from the 1979 level, to 38,479 flasks. Increased usage in batteries and dental preparations was reported, but declines were reported for measuring and control devices, caustic soda manufacture, and mildew-proofing paint. The use of mercury in wiring devices and switches also fell. Approximate percentages of mercury consumption in 1980 by use were as follows: electrical apparatus—28 percent; electrolytic preparation of chlorine and caustic soda —24 percent; mildew-proofing paint—22 percent; industrial and control instruments—8 percent; and other applications—18 percent.

Imports of mercury usually account for a significant portion of apparent U.S. consumption, ranging between 62 and 45 percent of use in recent years. In 1980, imports of mercury dropped 60 percent from the 1979 level. Japan was the major supplier, followed by Spain, and Mexico.

Stocks of mercury (excluding metal held by the U.S. Government) held by consumers and dealers at the end of December, 1980 were 17,980 flasks, 2 percent below a year earlier. Producer stocks on December 31, 1980 were 11,493 flasks, up 25 percent from the year-earlier level. As of November 30, 1980, the U.S. stockpile inventory of mercury totaled 191,391 flasks, compared with a goal of 10,500 flasks.

World production of mercury in 1980 was estimated to be less than 2 percent below 1979 output. Producers in Italy, Spain, and the U.S.S.R. reportedly continued to restrict sales of mercury in 1980; while Italian, Mexican, and Canadian mining operations continued to be sharply curtailed.

Mercury prices increased in 1980, with the annual average New York price of $389.45 per flask the highest annual average since 1970, when it was $407.77 per flask.

World Production of Mercury In Flasks of 34.5 Kilograms (76 Pounds)

Year	Yugoslavia	Peru	Philippines	Chile	China[1]	Canada	Czechoslovakia	Turkey	Italy	Japan	Mexico	Spain	Algeria	United States	USSR[1]	World Total
1968	14,794	3,132	3,544	513	20,000	5,700		4,670	53,317	5,084	17,202	56,943		28,874	45,000	259,694
1969	14,330	3,592	3,478	286	20,000	21,200		6,544	48,733	5,613	22,500	64,862		29,640	47,000	289,267
1970	15,461	3,196	4,648	388	20,000	24,400		8,592	44,470	5,170	30,256	45,552		27,296	48,000	284,014
1971	16,593	3,462	5,020	502	26,000	18,500		10,460	42,613	5,564	35,390	50,831		17,883	50,000	300,634
1972	16,419	4,550	3,341	640	26,000	14,637		7,963	41,801	5,019	22,510	53,994		7,349	50,000	278,968
1973	15,606	3,581	2,169	798	26,000	12,500		7,861	33,504	3,742	21,646	62,069		2,227	52,999	270,014
1974	15,838	3,252	812	921	26,000	14,000	5,541	8,833	25,991	1,409	25,933	54,354	14,000	2,189	54,000	257,477
1975	16,941	1,530	244	97	26,000	12,000	5,900	5,421	31,677	—	14,214	44,010	28,000	7,366	55,000	252,329
1976	12,503	—	—	13	26,000	—	6,200	4,899	22,278	—	15,026	42,729	30,915	23,133	56,000	243,274
1977	3,133	—	—	26	20,000	—	5,950	4,686	406	—	9,660	35,013	30,429	28,244	58,000	199,539
1978					20,000		6,370	5,020	87		2,205	31,039	30,603	24,189	60,000	183,597
1979[2]					20,000		6,300	5,000	—		2,000	35,000	30,000	29,343	61,000	193,021
1980[1]											1,500	30,000	30,000	33,200		190,200
1981																

[1] Estimate. [2] Preliminary. *Source: Bureau of Mines*

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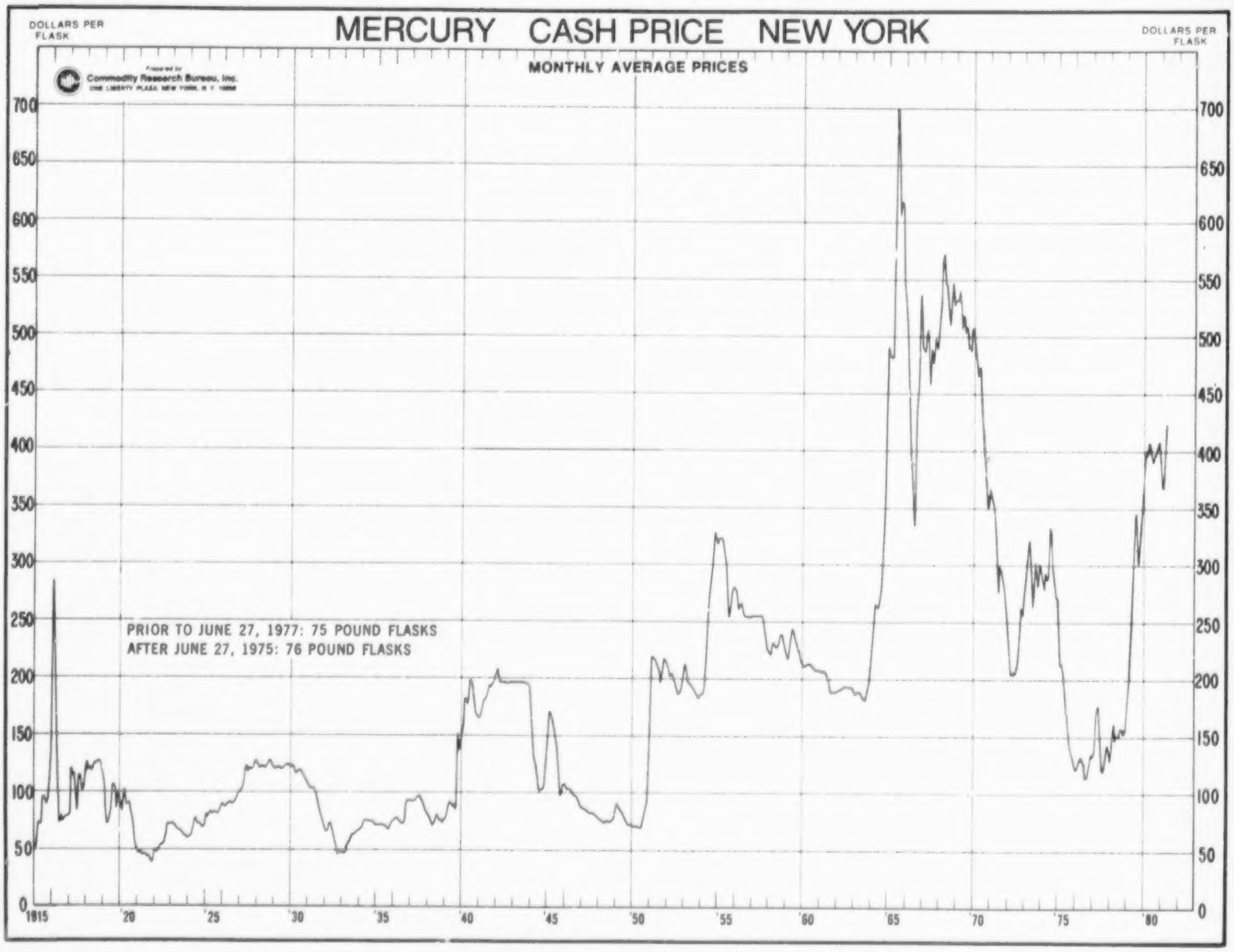
MERCURY



Average Price of Mercury in New York In Dollars Per Flask of 76 Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1968	531.09	566.21	571.90	547.14	543.18	519.75	509.77	516.27	540.70	547.83	527.33	531.14	537.69
1969	530.86	539.79	529.62	506.52	518.81	503.24	508.48	489.29	491.43	486.83	507.94	505.95	509.90
1970	489.09	469.33	464.52	472.54	455.15	423.18	418.18	381.67	366.90	350.45	360.56	366.14	418.14
1971	357.25	353.21	340.43	323.09	301.00	275.68	299.76	295.00	288.09	280.79	269.00	252.10	302.95
1972	222.14	216.00	205.35	203.05	170.95	205.86	213.00	239.04	262.50	256.30	259.00	267.80	226.76
1973	284.59	303.10	320.13	305.81	273.49	262.50	273.95	301.83	280.79	293.45	301.83	293.83	291.27
1974	282.84	279.05	292.07	285.82	288.32	333.35	328.56	296.09	290.00	281.52	270.50	270.50	291.55
1975	223.05	212.50	212.50	202.84	170.00	170.00	149.09	141.00	137.50	131.91	130.00	121.50	166.82
1976	120.55	126.63	127.87	131.64	125.70	113.50	113.50	113.77	120.60	132.17	133.08	132.00	124.25
1977	137.02	168.03	173.50	150.38	135.79	120.68	122.26	123.54	137.57	142.76	135.80	129.12	139.70
1978	143.29	160.58	147.57	147.08	151.98	149.55	157.11	157.00	151.67	152.34	154.55	170.55	153.60
1979	190.80	202.63	224.32	255.00	300.55	343.90	322.34	300.33	313.16	324.13	328.63	362.08	288.99
1980	383.75	399.90	396.76	406.81	398.33	389.57	397.11	397.26	402.62	407.83	404.56	376.19	396.72
1981	366.00	386.79	411.18	423.41									
1982													

Source: American Metal Market

Average Price of Mercury at London In U.S. Dollars Per Flask

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1968	536.0	597.5	587.9	566.8	561.5	524.6	518.6	523.7	540.8	545.3	532.6	526.9	546.80
1969	532.3	533.3	533.3	533.7	532.2	532.9	533.1	531.9	524.5	526.3	560.1	563.4	536.41
1970	494.3	460.1	464.0	464.0	439.3	414.3	413.0	370.3	355.7	346.2	359.4	358.5	411.45
1971	359.8	359.6	335.8	316.6	285.9	251.1	278.7	255.4	256.0	244.2	233.9	210.2	282.46
1972	208.1	198.8	173.4	141.4	153.3	177.4	191.1	222.5	241.1	237.8	242.8	248.5	203.01
1973	260.7	289.4	303.9	283.0	257.8	243.7	263.4	274.8	266.2	270.7	286.6	282.3	273.54
1974	266.7	269.5	270.3	268.0	274.4	315.6	304.5	274.7	272.2	259.6	245.5	194.4	267.94
1975	183.75	194.69	170.00	141.75	137.06	127.50	114.69	114.67	111.69	103.07	84.08	78.28	130.10
1976	81.38	94.51	99.06	99.63	82.00	82.50	83.25	83.25	87.75	100.23	101.67	108.38	91.07
1977	145.79	165.64	184.44	159.32	138.28	122.79	118.58	122.82	130.63	136.34	126.43	137.32	140.70
1978	131.21	130.50	130.10	132.50	131.25	124.83	127.71	128.00	127.29	126.17	137.38	151.86	131.57
1979	196.00	218.49	241.50	262.29	301.86	343.89	301.00	301.63	310.76	324.46	333.34	365.63	291.73
1980	—	—	410	—	—	390	—	—	418	—	—	390	400.00

Source: U.S. Bureau of Mines

Salient Statistics of Mercury in the United States In Flasks (76 Pounds Each)

Year	Net Import Reliance as a % of Apparent Consumption	Ore Treated (1,000 Short Tons)	Mercury Produced[2]		Production		Stocks, Dec. 31			Exports	U.S. Imports (For Consumption) From:					
			Flasks	Pounds per Ton of Ore	Mine	Secondary	Producers	Consumers & Dealers	Total		Total	Canada	Italy	Mexico	Spain	Yugoslavia
1968		434.2	28,857	5.1	28,874	34,380	1,059	21,848	22,907	7,496	23,246	5,626	252	1,928	12,900	1,171
1969		432.6	28,552	5.0	29,640	13,650	2,920	19,772	22,692	507	31,924	15,546	5,041	7,398	2,602	831
1970		424.5	26,795	4.8	27,296	8,051	3,861	12,693	16,554	4,653	21,972	17,872	1,101	920	2,002	—
1971		265.8	17,444	5.0	17,883	16,666	5,373	11,489	16,862	7,232	28,449	18,198	250	4,786	2,152	420
1972		82.6	7,004	6.5	7,349	12,651	4,171	11,537	15,708	400	28,834	13,803	—	5,529	1,829	1,097
1973		26.3	2,101	6.1	2,227	10,329	3,927	14,019	17,946	342	46,026	17,440	1,005	2,775	7,286	3,648
1974		28.9	1,680	4.4	2,189	8,293	4,100	15,777	19,877	466	52,180	16,972	845	10,597	6,293	4,245
1975	69	76.8	6,905	6.8	7,366	8,038	4,858	20,691	25,549	339	43,865	12,891	7,340	2,213	4,575	4,336
1976	62	185.1	23,042	9.5	23,133	3,363	9,494	22,240	31,734	501	44,415	2,853	13,172	1,719	4,824	6,739
1977	45	216.6	28,244	9.9	28,244	6,566	11,275	22,903	34,178	852	28,750	1,708	671	4,668	8,790	3,050
1978	64	256.2	24,144	7.2	24,163	9,262	16,600	22,149	38,749	N.A.	43,148	895	5,913	813	13,923	—
1979[1]	55	241.7	29,499	7.5	29,519	15,587	9,181	18,401	27,582	N.A.	26,448	3,943	4,429	403	8,507	—
1980[3]	49				30,396	15,800	11,493	17,980	29,473			842	—	989	3,854	—
1981																

[1] Preliminary. [2] Excludes mercury produced from placer operation & from clean-up activity at furnaces & other plants. [3] Estimate. *Source: Bureau of Mines*

Mercury Consumed in the United States In Flasks

Year	Batteries	Chlorine & Rust. Prep.	Catalysts	Dental Prep.	Electrical Appar.	Electrolytic Prep.	General Lab. Use	Industrial & Control Instrum.	Paint		Wiring Devices & Switches	Meas. & Control Devices	Other	Grand Total
									Anti-Fouling	Mildew Proofing				
1968			1,914	3,079	19,630	17,453	1,989	7,978	392	10,174			8,275	75,422
1969			2,958	2,880	18,490	20,720	1,936	6,655	244	9,486			9,134	77,372
1970			2,238	2,286	15,952	15,011	1,806	4,832	198	10,149			5,858	61,503
1971			1,012	2,361	16,885	12,154	1,798	4,871	414	8,191			2,407	52,257
1972			800	2,983	15,553	11,519	594	6,541	32	8,190			4,258	52,907
1973			673	2,679	18,000	13,070	658	7,155	32	7,571			1,913	54,283
1974			1,298	3,024	19,678	16,897	476	6,202	6	6,807			2,452	59,479
1975			838	2,340	16,971	15,222	335	4,598	—	6,928			1,750	50,838
1976			1,264	1,990	27,498	16,054	595	5,067	—	7,845			2,909	64,870
1977			1,545	1,230	29,180	10,744	406	5,221	—	8,365			2,589	61,259
1978	13,825	11,166	N.A.	512	10,897	11,166	420	4,078		8,956	3,178	3,489	11,763	48,766
1979[1]	7,988	12,180	548	793	7,719	12,180	410	3,602		9,979	3,213	3,603		45,442
1980[2]	4,315	9,561	254	1,154			111				2,396	2,886		38,479

[1] Preliminary. [2] Estimate. *Source: Bureau of Mines*

Milk

Milk production in the U.S. in 1980 totaled a record 128.4 billion pounds, 4.1 percent above 1979 (3.8 percent greater after adjusting for leap year). The increase in production reflected both a 3.4 percent increase in per cow output and an 0.7 percent rise in milk cows in 1980 from 1979. The year-to-year increase in milk cows on farms (between January 1 in 1980 and in 1981) from 10.78 to 10.87 million was the first increase since 1954. Factors contributing to the increased output per cow were the large number of replacement heifers that came into production during 1978 and 1979 which approached their full productivity in 1980, and favorable weather and pasture conditions in the Lake States region during late summer and early fall. Also, the milk-feed price ratio remained relatively advantageous, averaging 1.48 in 1980 (vs. 1.55 in 1979), and the rate of concentrate ration feeding increased in 1980 by an average of 4 percent from 1979.

The dairy replacement herd totaled 4.4 million head as of January 1, 1981, up 4.5 percent from 1980 and the highest total since 1966. There were 40 heifers per 100 cows in the replacement herd, the record number for the date, although off slightly from the 40½ heifers per 100 posted on July 1, 1980.

Consumption Trends

Commercial disappearance of milk and dairy products during 1980 declined 0.8 percent from 1979 (on a milkfat equivalent basis). Butter consumption in 1980 declined over 2 percent and commercial disappearance of American cheese was off over 4 percent. Fluid milk sales in 1980 were off slightly from 1979. Almost all of the decrease in dairy product sales occurred in the second quarter of 1980 and was attributed to the weak national economy and relatively favorable meat prices. Increased meat prices and higher consumer incomes in 1981 were expected to cause increased commercial use of milk and dairy products in 1981.

Per capita civilian consumption of milk and dairy products decreased by 5 pounds during 1980 to 554 pounds on a milk equivalent basis. Per capita use of milkfat also declined in 1980 to 20.5 pounds, off 0.1 pound from 1979. This small decline was due to lower fluid milk sales as there was virtually no change in butter and cheese consumption. Per capita consumption of whole milk declined 5.1 percent while consumption of low fat and skim milks increased 1.8 percent. Cream and cream mixtures consumption also increased 1.8 percent in 1980 from 1979.

Federal Milk Market Orders

An average of 117,518 producers (0.9 percent more than in 1979) delivered 84.0 billion pounds of milk (up 5.8 percent from 1979) to handlers regulated under the 47 Federal Milk Marketing Orders in effect in 1980. Daily deliveries per producer averaged 1,953 pounds in 1980, an increase of 4.5 percent from 1979.

Producer milk sold for fluid use (Class I milk) totaled 41 billion pounds, 0.2 percent less than in 1978. Combined with the increase in producer deliveries, this resulted in the Class I utilization percentage declining to 48.8 percent from the previous year's 51.6 percent. Manufactured products use (Class II) accounted for 51.2 percent.

Class I prices are the minimums that handlers must pay for Grade A milk used as a fluid beverage under a federal milk marketing order program. Class I minimums are set at a fixed premium in each market order to the Grade B (manufacturing use only) price paid in the Minnesota-Wisconsin area as reported by the USDA (the M-W price). In each federal order, the total revenue from fluid sales at the higher Class I price and sales of surplus Grade A milk at the lower Class II price are pooled and distributed back to producers as a blend price. Thus, the Federal Milk Market Orders price milk according to its end use, and producers in each order are paid the same average price according to each market order's Class I and II utilization.

The producer blend price in 1980 averaged $12.86 per cwt., 3.5 percent butterfat (BF), up from $11.97 in 1979 because of increases in the M-W price, basically caused by increases in the support price. The minimum Class I price in the federal market orders averaged $13.77 per cwt., 3.5 percent BF, in 1980, $0.89 per cwt. above the 1979 average.

1981 Government Support Program

The dairy price support program is achieved by CCC willingness to purchase butter, cheese, and nonfat dry milk at prices which relate to the support price for milk. Based on 1980's record milk production and the decline in per capita dairy product consumption, CCC stocks of dairy products at the end of December 1980 had increased to more than double the year earlier level. Because of the high cost of purchasing and storing these stocks, President Reagan signed legislation which removed the requirement for semi-annual increases in the support price. On March 31, 1981 the USDA announced that the support price would not be increased as scheduled on April 1, 1981 and that it would remain at $12.80 per cwt. (at 3.5% BF). Further major changes (cost cutting) in the dairy price support program were apparently being contemplated by the Reagan administration. Such changes could possibly be implemented before the next scheduled increase in the support price on August 1, 1981.

World Fluid Milk Production (Cow's Milk) In Millions of Metric Tons[3]

Year	Australia	Brazil	Canada	Czechoslovakia	Denmark	Finland	W. Germany	U.S.S.R.	India	Netherlands	New Zealand	France	Poland	Switzerland	United Kingdom	United States
1968	15.3	14.8	18.3	10.1	11.3	7.7	48.8	162.9		17.0	13.1	67.1	*'67–71*	7.1	26.5	117.3
1969	16.6	16.3	18.7	10.5	10.8	7.7	49.0	178.4		17.6	13.9	61.0	*Avg.*	7.0	26.8	115.3
1970	17.0	17.0	18.3	10.6	10.2	7.2	48.2	181.4		18.2	13.0	60.1	*(14.8*	6.9	27.3	117.0
1971	16.1	16.3	17.8	10.9	10.0	7.2	46.7	183.4		18.5	13.1	60.9	*M.T.)*	7.0	28.0	118.5
1972[3]	7.3	7.5	8.0	5.0	4.8	3.3	21.5	83.2		9.0	6.2	29.9	15.9	3.2	13.4	54.3
1973	7.3	7.2	7.7	5.3	4.7	3.2	21.3	88.3		9.4	6.0	30.4	16.6	3.3	14.3	52.4
1974	7.0	8.5	7.6	5.3	4.8	3.1	21.5	91.8		9.9	5.7	30.6	17.0	3.4	13.7	52.4
1975	6.7	8.8	7.7	5.3	4.9	3.2	21.6	90.8		10.2	5.9	30.9	16.7	3.4	13.5	52.3
1976	6.4	9.3	7.7	5.4	5.0	3.3	22.2	89.7	9.7	10.5	6.4	29.5	16.5	3.5	14.4	54.6
1977	5.9	9.5	7.7	5.5	5.1	3.2	22.5	94.9	9.8	10.6	6.6	30.2	16.9	3.5	15.2	55.7
1978	5.6	10.5	7.5	5.5	5.3	3.2	23.3	94.5	10.1	11.4	6.1	30.9	17.1	3.5	15.9	55.2
1979[1]	5.8	10.1	7.6	5.7	5.2	3.3	23.9	93.3	10.5	11.6	6.4	32.0	17.0	3.6	15.9	56.1
1980	5.5	10.5	7.9	5.7	5.1	3.4	24.6	91.5	10.2	11.8	6.8	33.5	16.8	3.7	16.4	57.8
1981[2]																

[1] Preliminary. [2] Estimate. [3] Data prior to 1972 are in BILLIONS OF POUNDS. *Source: Foreign Agricultural Service, U.S.D.A.*

Milk Cows & Cattle and Milk Production in the U.S.

Year	Number of Milk Cows on Farms[2] (Thousands)	Production Per Milk Cow[3]		Total Milk Production[3]			Milk Sold to Plants & Dealers		Milk Sold Directly to Consumers		Milk Utilized Bill. Lbs.	Farm Value of All Milk Mill. $
		Milk (Pounds)	Milk Fat (Pounds)	Quantity Billion Pounds	% of Fat in All Milk Produced	Milk Fat Bill. Lbs.	Quantity Billion Pounds	$ Per 100 Lbs.	Quantity Million Quarts	¢ Per Quart		
1968	12,832	9,135	335	117.2	3.67	4.3	108.8	5.24	826.8	24.8	112.6	6,206
1969	12,307	9,434	346	116.1	3.67	4.3	108.5	5.49	785.0	25.8	111.8	6,435
1970	12,000	9,751	357	117.0	3.66	4.3	110.1	5.71	798.6	27.0	113.0	6,757
1971	11,839	10,015	367	118.6	3.66	4.3	112.2	5.87	731.2	27.9	114.8	7,035
1972	11,700	10,259	377	120.0	3.68	4.4	114.2	6.07	714.8	27.8	116.3	7,361
1973	11,413	10,119	370	115.5	3.66	4.2	109.9	7.14	706.9	31.0	112.0	8,331
1974	11,230	10,293	377	115.6	3.67	4.2	110.4	8.33	718.0	34.9	112.3	9,723
1975	11,139	10,360	380	115.4	3.68	4.2	110.4	8.75	726.8	35.4	112.1	10,193
1976	11,032	10,894	399	120.2	3.66	4.4	115.6	9.66	704.5	36.4	117.3	11,715
1977	10,945	11,206	409	122.7	3.65	4.5	118.2	9.72	696.6	36.7	119.9	12,028
1978	10,803	11,243	412	121.5	3.67	4.5	117.3	10.58	715.5	38.8	118.9	12,974
1979[1]	10,743	11,488	420	123.4	3.66	4.5	119.5	12.00	715.0	42.3	121.1	14,968
1980[1]	10,815	11,875		128.4				13.04				
1981												

[1] Preliminary. [2] Average number on farms during year excluding heifers not yet fresh. [3] Excludes milk sucked by calves & milk produced by cows not on farms. *Source: Crop Reporting Board, U.S.D.A.*

Utilization of Milk in the United States In Millions of Pounds (Milk Equivalent)

Year	Butter from Whey Cream	Creamery Butter[1]	Cheese[6]	Cottage Cheese (Creamed)	Condensed Whole Milk	Evaporated Milk[5]	Dry Whole Milk Products	Frozen Dairy Products[2]	Fluid Consumption		Fed to Calves	Other Mfg. Products[4]
									Nonfarm	Farm[5]		
1968	1,481	24,912	17,376	1,094	838	3,046	589	10,979	53,700	2,616	1,821	396
1969	1,510	23,731	17,616	1,150	714	3,163	489	11,028	52,800	2,397	1,745	424
1970	1,659	23,934	19,566	1,250	572	2,687	508	11,041	51,998	2,306	1,702	480
1971	1,820	23,904	20,947	1,296	537	2,702	535	10,973	51,853	2,117	1,635	705
1972	1,981	22,744	22,763	1,321	594	2,540	552	10,951	53,227	1,914	1,624	762
1973	2,054	18,609	23,605	1,138	560	2,375	577	11,070	52,413	1,766	1,584	744
1974	2,237	19,334	25,669	1,018	592	2,223	499	11,188	50,414	1,643	1,558	804
1975	2,119	19,873	23,883	1,028	686	2,020	464	11,898	51,123	1,505	1,567	672
1976	2,543	19,404	28,763	1,050	643	1,892	554	11,623	51,505	1,404	1,562	744
1977	2,543	21,853	28,865	1,056	580	1,809	514	11,707	51,383	1,295	1,548	684
1978	2,660	19,712	29,919	1,055	534	1,725	549	11,744	51,223	1,174	1,499	707
1979[3]	2,814	19,400	31,578	1,018	563	1,756	630	11,733	51,421	1,044	1,449	723
1980[7]				1,000			600	11,700	51,000			
1981												

[1] Excludes whey butter. [2] From milk and cream only. [3] Preliminary. [4] Includes dry cream, malted milk, dry part skim milk, dry ice cream mix. [5] Data includes evaporated & sweetened condensed milk. [6] American & other. [7] Estimate. *Source: Crop Reporting Board, U.S.D.A.*

MILK

Milk Production on Farms in the United States In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1969	9,408	8,834	10,015	10,237	11,038	10,710	10,121	9,643	9,143	9,091	8,669	9,199	116,108
1970	9,405	8,857	10,103	10,295	11,053	10,708	10,212	9,734	9,203	9,278	8,837	9,321	117,007
1971	9,576	8,994	10,220	10,423	11,159	10,815	10,285	9,860	9,328	9,444	9,004	9,427	118,532
1972	9,728	9,391	10,452	10,566	11,268	10,946	10,442	9,978	9,431	9,437	8,911	9,362	119,904
1973	9,532	8,932	10,176	10,298	10,952	10,532	10,014	9,489	8,877	8,948	8,590	9,052	115,385
1974	9,335	8,763	9,989	10,124	10,869	10,615	10,171	9,711	9,137	9,100	8,663	9,109	115,586
1975	9,358	8,773	9,999	10,116	10,787	10,445	9,975	9,544	9,050	9,162	8,832	9,357	115,398
1976	9,597	9,289	10,285	10,475	11,107	10,786	10,435	10,117	9,590	9,603	9,210	9,686	120,180
1977	9,888	9,285	10,579	10,732	11,358	10,968	10,671	10,362	9,810	9,824	9,380	9,797	122,654
1978	9,958	9,242	10,491	10,610	11,151	10,817	10,503	10,182	9,683	9,780	9,320	9,724	121,461
1979	9,960	9,281	10,534	10,603	11,243	10,948	10,683	10,409	9,987	10,063	9,623	10,077	123,411
1980[1]	10,307	9,970	10,946	11,013	11,664	11,321	11,036	10,782	10,364	10,455	10,076	10,491	128,425
1981[1]	10,739	10,093	11,426	32,258									

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[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

Average Price Received by U.S. Farmers for All Milk[2] (Sold to Plants) In Dollars Per CWT.

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average[1]
1969	5.33	5.34	5.42	5.51	5.66	5.64	5.49	5.44	5.46	5.47	5.48	5.56	5.49
1970	5.59	5.58	5.61	5.82	5.93	5.93	5.69	5.64	5.61	5.68	5.75	5.84	5.71
1971	5.79	5.85	5.89	5.96	6.03	5.92	5.84	5.81	5.75	6.07	5.82	5.93	5.87
1972	5.95	6.04	6.07	6.09	6.23	6.14	6.02	6.06	5.97	6.02	6.15	6.29	6.07
1973	6.36	6.50	6.59	6.67	6.88	6.88	6.83	7.26	7.54	7.83	8.16	8.47	7.14
1974	8.89	8.92	8.96	8.84	8.26	7.69	7.75	7.75	8.08	8.35	8.49	8.27	8.33
1975	8.43	8.38	8.22	8.18	8.07	7.99	8.64	8.64	9.25	9.70	10.00	10.30	8.75
1976	10.10	9.76	9.75	9.40	9.25	9.14	9.70	9.70	9.84	9.96	9.89	9.72	9.66
1977	9.65	9.53	9.45	9.44	9.37	9.40	9.66	9.66	9.97	10.10	10.20	10.20	9.72
1978	10.20	10.20	10.20	10.10	10.10	10.00	10.50	10.50	10.90	11.30	11.60	11.80	10.60
1979[3]	11.90	11.90	11.80	11.60	11.50	11.50	12.00	12.00	12.30	12.60	12.90	12.80	12.00
1980[3]	12.80	12.80	12.70	12.70	12.60	12.50	12.60	12.80	13.20	13.70	14.00	14.10	13.04
1981	14.10	14.00	13.80	13.70									

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[1] Weighted average. [2] Adjusted for seasonal variation. [3] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

Farm Price of Milk[1] Eligible for Fluid Market[2] In Dollars Per Hundred Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1969	6.62	6.62	6.63	6.62	6.65	6.65	6.67	6.71	6.77	6.80	6.86	6.92	6.70
1970	6.91	6.94	6.89	6.88	6.89	6.88	6.90	6.90	6.92	6.98	7.05	7.09	6.94
1971	7.10	7.07	7.12	7.11	7.14	7.11	7.11	7.11	7.11	7.14	7.14	7.14	7.12
1972[2]	6.42	6.43	6.31	6.13	6.07	5.99	6.09	6.32	6.57	6.72	7.34	7.39	6.38
1973	6.84	6.90	6.83	6.68	6.67	6.68	6.85	7.45	8.13	8.55	8.89	9.02	7.42
1974	9.09	9.13	9.19	9.16	8.68	8.10	8.00	8.11	8.40	8.67	8.83	8.63	8.66
1975	8.77	8.70	8.51	8.46	8.33	8.24	8.51	8.89	9.49	9.91	10.20	10.50	9.02
1976	10.40	10.10	10.00	9.63	9.49	9.36	9.64	9.91	10.10	10.30	10.20	9.99	9.93
1977	9.91	9.79	9.67	9.63	9.56	9.61	9.72	9.91	10.20	10.40	10.50	10.40	9.96
1978	10.50	10.50	10.40	10.30	10.30	10.20	10.30	10.70	11.00	11.50	11.80	12.00	10.80
1979	12.00	12.10	12.00	11.80	11.70	11.60	11.80	12.20	12.50	12.80	13.10	13.00	12.20
1980	13.00	13.00	12.90	12.80	12.70	12.70	12.70	13.00	13.40	13.90	14.20	14.30	13.22
1981	14.30	14.20	14.00	13.90									

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[1] MILK, Standard Grade, 3.5% milkfat. Weighted average price per 100 pounds (f.o.b. city). [2] Prices prior to 1972 are dealers' avg. buying prices for fluid milk. *Source: Crop Reporting Board, U.S.D.A.*

U.S. Milk-Feed Price Ratio[1] In Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1978	1.50	1.52	1.51	1.47	1.49	1.43	1.45	1.54	1.59	1.64	1.62	1.63	1.53
1979	1.62	1.59	1.58	1.56	1.53	1.51	1.43	1.51	1.54	1.55	1.59	1.55	1.55
1980	1.54	1.57	1.55	1.55	1.53	1.50	1.47	1.42	1.39	1.42	1.40	1.38	1.48
1981	1.39	1.40	1.42	1.39									

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[1] Pounds of 16% protein ration equal in value to one pound of milk. *Source: Economics & Statistics Service, U.S.D.A.*

Molasses

The USDA Foreign Agricultural Service estimated 1980/81 world production of industrial molasses at 30.7 million tonnes (revised as of May, 1981), an increase of 3 percent from the revised 1979/80 estimate of 29.8 million tonnes. World trade in molasses appeared to have declined as developing countries increasingly used more of their domestic production for animal feed and production of fuel alcohol. Molasses is also used in yeast production.

U.S. imports in 1980 declined 37 percent from 1979 to 928 thousand tonnes, the lowest total in modern times. Leading exporters to the U.S. in 1980 were Mexico, the Dominican Republic (mostly imported by Puerto Rican rum producers), Colombia, Australia, and Ecuador. These five countries accounted for 57 percent of U.S. imports, with Mexico accounting for 19 percent vs. 26 percent in 1979.

The U.S. supply of molasses in 1980 totaled 529 million gallons, off 15 percent from 1979. U.S. cane molasses production declined 3 percent while beet molasses production was up 3 percent from 1979.

Molasses prices (f.o.b. tankcar) increased throughout 1980 to record highs, with blackstrap molasses in New Orleans averaging $96.50 per ton and beet molasses in Colorado $95.60 per ton vs. $82.95 and $85.30 per ton, respectively, in 1979. Cane molasses prices peaked in January 1981 at $118 per ton and then declined to $98 per ton by May 1981. Beet molasses prices were steady at $100 per ton during early 1981.

World Production of Molasses (Industrial) In Thousands of Metric Tons

Crop Year	Argentina	Brazil	Cuba[2]	France	Germany, West	India	Italy	Mexico	Philippines	Poland	Australia	United Kingdom	United States	U.S.S.R.	World Total
1972–3	478	1,775	1,200	991	629	1,696	370	1,190	836	505	548	322	1,853	3,000	24,425
1973–4	638	2,069	1,312	1,200	669	2,000	250	1,240	1,000	514	599	325	1,596	2,842	26,927
1974–5	612	2,950	1,312	1,179	712	2,000	302	1,227	890	514	586	235	1,592	2,746	26,905
1975–6	557	2,400	1,364	1,013	842	1,700	330	1,227	1,050	642	620	255	1,813	2,735	27,244
1976–7	557	3,000	1,391	1,087	831	2,059	330	1,076	940	670	642	310	1,960	2,700	29,461
1977–8	599	5,400	1,436	1,050	781	2,971	340	1,340	808	656	642	100	1,600	3,242	33,184
1978–9	818	5,000	1,296	947	685	2,564	365	1,410	818	657	577	103	1,625	3,306	32,431
1979–0[1]	788	4,800	1,185	968	646	1,700	395	1,260	789	612	598	111	1,519	3,062	30,023
1980–1[3]	620	5,200	1,111	975	645	2,200	400	1,300	820	542	675	110	1,558	3,056	31,013

[1] Preliminary. [2] Includes hi-test molasses. [3] Estimate. *Source: Foreign Agricultural Service, U.S.D.A.*

Salient Statistics of Industrial Molasses in the United States In Millions of Gallons

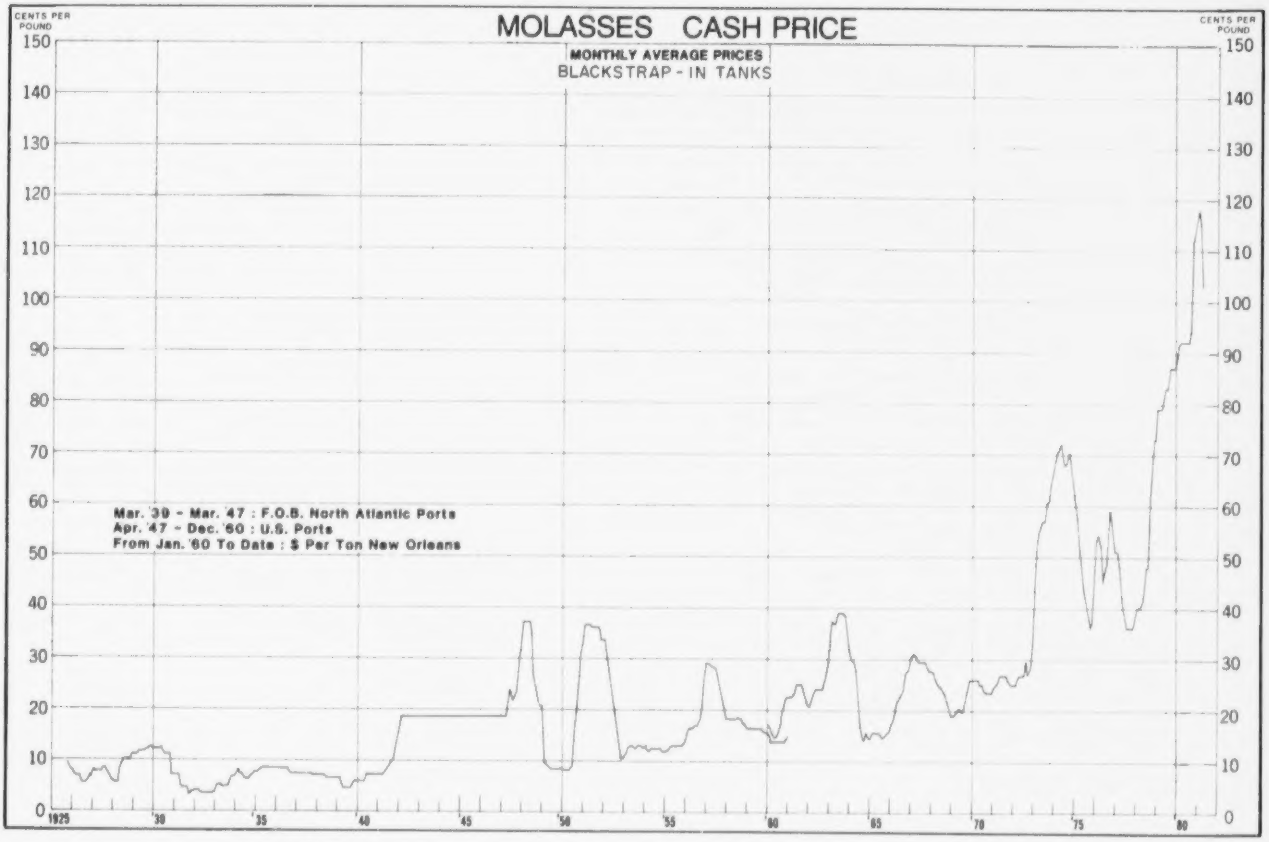
	Production in Mainland Areas									Domestic Utilization					
Year	Mainland Cane	Domestic Beet	Refiners' Blackstrap	Citrus	Hydrol	Total	Imports	Total Available Supplies	Exports	Distilled Spirits	Pharmaceuticals & Other Edibles	Yeast, Citric Acid & Vinegar	Total Industrial	Livestock Feeding[2]	Total Utilization
1972	125.6	166.6	39.1	8.3	22.5	362.1	406.8	828.4	3.1	6	57	99	163	678	844
1973	112.4	158.1	44.9	9.8	23.0	348.2	403.3	797.9	4.7	13	59	100	164	641	814
1974	102.1	155.9	45.0	10.6	23.5	337.1	384.3	755.3	12.6	18	59	100	175	559	739
1975	125.4	188.2	45.0	10.2	24.5	393.3	303.3	755.3	12.6	18	59	100	175	559	739
1976	131.7	158.0	50.3	5.8	37.0	382.9	411.2	739.6	6.3	6.9	60.0	100.5	167.4	572.2	740
1977	114.3	167.1	50.7	5.2	39.7	377.0	347.6	829.7	11.2	3.5	48.2	100.9	152.6	665.8	818
1978	106.7	140.2	44.6	4.3	41.7	337.5	271.0	743.9	22.9	7.4	25.6	92.7	125.7	618.2	744
1979[1]	112.4	117.0	39.0	3.5	40.3	312.2	231.7	639.8	20.3	5.7	20.8	93.1	119.6	520.2	640
1980								582.2	19.3	8.8	19.3	77.7	105.8	476.4	582

[1] Preliminary. [2] Residual. *Source: Agricultural Marketing Service, U.S.D.A.*

U.S. Annual Average Prices of Molasses, by Types (F.O.B. Tank Car or Truck) In Dollars Per Ton

	Blackstrap						Beet Molasses			Citrus	Corn
Year & Quarter	New Orleans	South Florida	Baltimore	Minneapolis	Omaha	Calif. Ports	Colorado	Wyo. & Montana	Ore., Utah & Idaho	Molasses Florida	Molasses Pekin, Ill.
1974	68.37	67.40	72.25	88.63	88.37	70.82	78.65	78.65	71.26	45.81	—
1975	45.32	45.63	51.37	62.75	63.81	50.03	55.80	61.81	59.70	41.97	—
1976	52.07	51.41	57.60	72.28	70.46	52.96	66.87	65.02	61.79	39.52	—
1977	40.55	42.52	47.08	54.62	58.84	42.96	41.76	45.41	55.10	50.65	—
1978	51.50	52.40	59.25	67.30	72.55	54.00	60.40	58.35	60.95	61.05	—
1979[2]	82.95	85.50	91.20	107.90	107.75	84.05	85.30	82.65	N.A.	79.40	—
1980	96.50						95.60				

[1] Per ton prices are based on 171 gallons for blackstrap, beet and corn molasses and on 175 gallons for citrus molasses. Prices represent sales F.O.B. terminal to the general feed trade and do not include sales made under various pricing arrangements above or below prices generally available to the ultimate user. Ton—2,000 lbs. Gallon—U.S. gallon. Prices are not rounded off to the nearest 5 cents. [2] Preliminary. *Source: Molasses Market News, Annual Summary, AMS, U.S.D.A. Denver Colorado, and Molasses Market News, Weekly, various issues*



Wholesale Price of Blackstrap Molasses (Cane) at New Orleans[1] In Dollars Per Ton[1]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1968	17.00	17.00	16.75	16.13	16.00	15.88	15.50	15.50	15.00	14.20	13.38	12.75	15.40
1969	12.50	12.50	13.30	13.50	13.50	13.50	13.50	14.20	15.26	15.96	16.49	16.49	14.22
1970[1]	25.65	25.65	25.65	25.65	24.80	24.80	23.50	23.20	23.10	23.10	23.20	23.10	24.28
1971	24.20	24.60	25.00	26.50	26.50	26.50	26.50	26.50	25.60	25.20	24.80	24.80	25.56
1972	24.80	24.80	26.00	26.50	26.50	26.50	26.60	29.60	26.90	27.40	28.40	32.40	27.20
1973	43.20	48.90	53.40	55.20	56.40	57.00	57.00	60.10	60.80	64.20	65.50	67.75	57.45
1974	68.80	70.50	71.00	72.00	69.50	68.00	68.00	69.25	70.40	67.00	64.00	62.00	68.37
1975	60.00	57.75	51.30	50.00	46.00	43.00	41.00	39.00	38.00	36.00	37.00	46.00	45.42
1976	53.00	54.00	53.00	52.00	45.00	47.00	48.00	54.00	59.00	57.00	52.00	51.00	52.08
1977	51.00	51.00	48.00	42.00	40.00	38.00	36.00	36.00	36.00	36.00	36.00	38.00	40.67
1978	40.00	40.00	40.00	41.00	42.00	46.00	48.00	48.00	56.00	65.00	73.00	73.00	51.08
1979	79.00	79.00	79.00	79.00	81.00	83.00	83.00	85.00	87.00	87.00	87.00	87.00	83.00
1980	89.90	91.50	92.00	92.00	92.00	92.00	92.00	92.00	94.40	103.50	111.60	113.00	96.40
1981	116.75	118.00	115.00										

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[1] Data prior to 1970 are for AT NEW YORK, F.O.B. TANK CAR OR TRUCK (BULK)—in CENTS PER GALLON.

Source: Economics Service, U.S.D.A.

Molybdenum

Molybdenum is a refractory metallic element used principally as an alloying agent in steels, cast irons, and superalloys to enhance hardenability, strength, toughness, and wear and corrosion resistance. The United States is historically the world's leading producer and exporter of molybdenum.

After 6 years of generally tight availability, the molybdenum market shifted to a surplus condition in 1980. World production was estimated to have increased about 4 percent in 1980 despite U.S. production losses due to the copper strike. World production was helped by an increase in Canadian output which had been reduced by mine strikes in 1979. Concurrently, both domestic and world demand softened.

U.S. production of molybdenum increased some 3 percent in 1980 from the 1979 level, according to preliminary data of the Bureau of Mines. Possibly 5 million pounds of byproduct molybdenum output was lost due to strikes within the copper mining industry.

Domestic consumption of molybdenum concentrate (converted to technical grade oxide) rose 4.9 percent in 1980 from the 1979 level. However, reported end-use consumption of molybdenum totaled 50.3 million pounds, 12 percent lower than the 57.2 million pounds reported in 1979 (based solely on monthly consumption reports). Reduced demand for molybdenum-containing steels accounted for most of the decline in consumption.

U.S. exports of molybdenum in concentrate and oxide form declined nearly 6% in 1980 from the 1979 level. Exports represented a significant portion of U.S. production and a major share of foreign consumption. Major export destinations were the Netherlands, Japan, and Belgium-Luxembourg.

Consumer stocks at the end of 1980 rose to 6.6 million pounds of contained molybdenum, 84 percent larger than stocks at the end of 1979.

Despite reduced demand, the domestic producer price on technical-grade molybdic oxide increased from $7.50 to $9.70.

World Mine Production of Molybdenum In 1,000 Pounds (Contained Molybdenum)

Year	Canada (Shipments)	Australia	Bulgaria	Chile	USSR	Japan	South Korea	China	Mexico	Norway	Philippines	United States	Peru	World Total
1968	22,463			8,521		630	423		176	487	139	93,477	1,785	128,071
1969	29,651			10,675	16,700	591	287		445	785	35	99,807	494	159,470
1970	33,772			12,569	17,000	582	254	3,300	311	750	71	111,352	1,338	181,429
1971	22,663			13,935	17,600	613	231	3,300	174	725	9	109,592	1,782	171,064
1972	28,493			13,045	18,100	494	111	3,300	172	562	—	112,138	1,689	178,423
1973	30,391			12,974	18,700	345	112	3,300	90	220	—	115,859	1,395	183,698
1974	30,736			21,466	19,400	235	166	3,300	95	—	—	112,011	1,434	185,568
1975	28,719	25		20,042	20,000	309	166	3,300	37	—	—	105,980	1,435	180,288
1976	32,229	0	300	24,028	20,600	485	264	3,300	35	—	—	113,233	999	195,473
1977	36,526	0	330	24,114	21,400	401	222	3,300	2	—	—	122,408	1,021	209,724
1978[1]	31,015	—	330	29,092	21,800	278	483	4,440	24	—	50	131,843	1,607	220,922
1979[1]	24,633	—	330	29,892	22,500	300	800	4,400	50	—	250	143,967	3,940	231,062
1980[2]	30,000			30,000								147,000	4,000	241,000

[1] Preliminary. [2] Estimate. *Source: Bureau of Mines*

Salient Statistics of Molybdenum in the United States In Thousands of Pounds (of Contained Molybdenum)

	Concentrate							Primary Products[3]							
		Shipments						Net Production				Shipments			
Year	Production	Total (Includes Exports)	Value Mill. $	For Exports	Consumption	Imports for Consumption	Stocks Dec. 31 [2]	Grand Total	Molybdic Oxide[4]	Molybdenum Metal Powder	Sodium Molybdate	To Domestic Destinations	For Exports	Consumption	Producers' Stocks Dec. 31
1968	93,477	93,245	151.0	19,790	75,647	1	12,208	69,675	51,504	1,990	965	53,462	10,300	49,271	18,170
1969	99,807	103,009	173.8	29,528	73,275	—	8,398	68,526	51,515	2,314	603	57,947	19,779	51,622	17,844
1970	111,352	110,381	190.1	32,998	76,101	25	9,715	75,383	57,669	1,741	743	58,365	17,730	45,337	25,904
1971	109,592	97,882	164.9	31,513	66,399	854	29,077	67,016	49,918	2,418	865	52,644	14,010	40,950	31,048
1972	112,138	102,197	170.5	34,390	62,560	385	45,243	64,841	47,934	3,637	1,111	59,420	16,118	45,558	28,898
1973	115,859	135,097	217.7	48,529	82,477	458	21,998	85,046	63,280	3,631	1,538	67,365	41,322	57,049	22,387
1974	112,011	118,163	234.7	39,965	91,706	155	18,659	88,509	66,378	2,953	1,784	75,929	38,870	63,476	16,078
1975	105,980	105,170	259.3	36,618	90,046	2,567	10,680	87,501	70,143	2,953	1,069	89,789	33,084	51,743	22,863
1976	113,233	114,527	333.5	30,935	84,966	2,093	9,390	83,970	65,743	3,839	1,132	99,144	31,796	50,448	13,210
1977	122,408	124,974	450.4	29,666	91,041	1,976	9,161	90,520	68,671	4,142	1,275	100,626	33,332	54,557	10,141
1978	131,843	130,694	608.0	31,183	96,375	2,705	8,980	96,052	83,220	4,194	1,489	105,921	35,353	61,091	7,996
1979[1]	143,967	143,504	871.1	36,405	103,152	2,329	9,520	101,754	84,799	4,946	1,541	109,419	35,773	60,388	8,502
1980[5]	148,517	149,059		31,295	108,206	2,000	17,467	108,000	73,759	4,785	1,142	98,000		56,000	25,000

[1] Preliminary. [2] At mines & at plants making molybdenum products. [3] Comprises ferromolybdenum, molybdic oxide, & molybdenum salts & metal. [4] Includes molybdic oxide briquets, molybdic acid, & molybdenum trioxide. [5] Estimate.
Source: Bureau of Mines

Nickel

Nickel's greatest value is in alloys with other elements, where it adds strength and corrosion resistance over a wide range of temperatures. U.S. reserves of nickel are small and imports account for a large percent of domestic consumption. In 1980, net imports accounted for about 73 percent of apparent consumption of nickel. Recovery of secondary nickel from scrap accounted for much of the remainder. U.S. imports of nickel in 1980 were about 10 percent larger than in 1979, according to Bureau of Mines data, with Canada the source of most imports.

U.S. consumption of nickel in 1980 was about 21 percent below the 1979 level, according to preliminary data of the Bureau of Mines. The pattern of nickel consumption by product lines showed only minor changes from the 1979 distribution. Stainless and alloys steels consumed 45 percent; nonferrous alloys —40 percent; and electroplating—10 percent of the nickel consumed. Trading in nickel futures was initiated on the London Metal Exchange (LME) in July, 1979.

World Mine Production of Nickel In Thousands of Short Tons of Contained Nickel

Year	Australia[3]	Philippines	Canada	Cuba	Finland[3]	Indonesia	Brazil	Morocco	Rhodesia Southern	N. Caledonia	Greece	Poland	South Africa	USSR	United States	World Trade
1972			259.0	35.0	5.9	24.7	3.7	.2	13.2	98.0	21.7	1.7	12.8	115.0	16.9	673.8
1973			274.5	35.0	6.6	22.9	3.9	.3	13.0	120.5	28.9	1.7	21.4	125.0	18.3	757.4
1974	22.0	—	296.6	37.4	6.6	23.3	3.9	.6	12.7	148.3	31.4	2.2	24.4	138.0	16.6	849.3
1975	40.0	10.3	267.0	40.3	6.1	21.2	3.5	.6	11.0	146.9	31.0	2.8	22.9	168.0	17.0	890.5
1976	91.0	17.6	265.5	40.7	7.2	31.7	5.8	.2	17.6	121.2	30.4	3.1	24.7	149.0	16.5	883.9
1977	94.7	4.05	259.4	40.8	6.7	36.5	4.7	.2	17.6	115.9	28.2	3.1	24.2	157.0	14.3	904.5
1978	90.8	34.2	143.4	40.8	5.1	35.2	3.9	.2	17.6	72.9	24.1	3.1	24.3	163.0	13.5	731.4
1979[1]	81.6	39.7	145.0	40.8	6.4	39.4	4.4	.2	17.6	89.6	22.7	3.1	24.3	168.0	15.1	776.5
1980[2]			130.0	40.0						80.0					16.0	721.0

[1] Preliminary. [2] Estimate. [3] Content of nickel sulfate and concentrates. *Source: Bureau of Mines*

Salient Statistics of Nickel in the United States In Short Tons

		Production		Nickel Consumed[1], By Uses										Stocks, Dec. 31	Nickel & Pdt's (Gross Weight)	
Year	Net Import Reliance as a % of Apparent Consumption	Primary	Secondary	Alloy Steels	Cast Irons	Copper Base Alloys	Magnet Alloys	Electroplating Anodes	Nickel Alloys	Stainless & Heat Resisting Steels	Super Alloys	Chemicals	Total All	At Consumers' Plants	Imports	Exports
1972		15,731	35,926	19.6	4.4	8.5	4.2	29.0	28.9	45.4			159,286	26,260	173,978	21,671
1973		13,895	32,629	44.7	6.8	17.1	10.5	51.1	85.8	137.2			197,723	28,759	190,418	22,070
1974		14,093	20,930	23.3	5.3	9.3	5.3	26.2	44.1	73.8			208,409	45,291	220,655	30,442
1975	72	14,343	17,880	20.3	4.4	9.4	3.3	19.2	37.2	38.2			146,495	35,485	160,507	30,121
1976	72	13,869	13,273	19.1	4.0	7.4	5.8	28.7	32.5	48.6	9.1	2.6	162,927	31,690	188,147	47,166
1977	71	12,897	12,449	17.8	3.7	7.0	.7	21.8	31.9	53.2	11.4	2.5	155,260	18,581	194,770	39,412
1978	80	11,298	12,304	17.2	4.3	7.0	.8	27.3	39.6	60.5	15.7	1.9	180,723	20,443	240,032	36,293
1979[2]	69	11,691	13,201	20.2	4.7	8.5	.7	28.5	41.1	69.6	17.6	1.2	196,293	19,518	183,742	50,810
1980[3]	73	12,500	13,000										165,000	17,000	178,000	47,000

[1] Exclusive of scrap. [2] Preliminary. [3] Estimate. *Source: Bureau of Mines*

Average Price of Nickel (Spot Cathode Sheets—Duty Paid—F.O.B. Refinery)
In Cents Per Pound—In Carload or Truckload Lots

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1971	133.0	133.0	133.0	133.0	133.0	133.0	133.0	133.0	133.0	133.0	133.0	133.0	133.0
1972	133.0	133.0	133.0	133.0	133.0	133.0	133.0	133.0	153.0	153.0	153.0	153.0	139.7
1973	153.0	153.0	153.0	153.0	153.0	153.0	153.0	153.0	153.0	153.0	153.0	153.0	153.0
1974	162.0	162.0	162.0	162.0	162.0	162.0	185.0	185.0	185.0	185.0	185.0	185.0	173.5
1975	201.0	201.0	201.0	201.0	201.0	201.0	201.0	201.0	220.0	220.0	220.0	220.0	207.3
1976	220.0	220.0	220.0	220.0	220.0	220.0	220.0	220.0	220.0	241.0	241.0	241.0	225.3
1977	241.0	241.0	241.0	238.0	241.0	241.0	241.0	241.0	215.5	215.5	210.0	207.0	231.1
1978	207.0	207.0	207.0	210.0	210.0	200.0	208.0	208.0	204.0	202.5	202.5	196.5	205.2
1979	196.5	205.0	205.0	242.5	272.5	305.0	302.5	302.5	302.5	302.5	302.5	315.0	271.2
1980	325.0	325.0	350.0	350.0	350.0	350.0	350.0	350.0	350.0	350.0	350.0	350.0	345.8
1981	350.0	350.0											

Source: Bureau of Labor Statistics (1022–0116)

Oats

U.S. production of oats in 1980 was estimated at 458 million bushels, 13 percent less than the 1979 crop of 527 million bushels. This was the lowest production since 1881. Growers harvested 8.64 million acres for grain, 11 percent below a year earlier and the smallest acreage harvested since 1867. Yield per harvested acre in 1980 averaged 53.0 bushels compared with 54.4 bushels in 1979. Acres abandoned and utilized for purposes other than grain accounted for 35.3 percent of the planted acres compared with 30.7 percent in 1979.

Most of the acreage on the northern Plains was seeded under dry conditions resulting in poor seed germination and uneven stands. The prolonged hot, dry weather during the growing season hastened maturity, and hindered normal grain development. Poor oat yield prospects coupled with drought-reduced hay production and pasture resulted in additional oat acreage utilized as forage or hay rather than harvested for grain.

Domestic disappearance of oats in 1980/81 was estimated (as of May 1981) at 524 million bushels, a decrease of 44 million bushels from the previous season. Domestic feed use was expected to decline by about 38 million bushels due to the reduced supplies while exports were expected to increase to 10 million bushels from 4 million bushels in 1979/80.

Oats in all storage positions on January 1, 1981, totaled 391 million bushels, 18 percent less than a year earlier, and the lowest amount in storage on January 1 since records began in 1942. January 1 stocks indicated a June–December 1980 disappearance of 304 million bushels, down 8 percent from the same period in 1979, and 13 percent below June–December 1978.

April 1, 1981 U.S. oat stocks in all positions totaled 256 million bushels, a decline of nearly 25 percent from April 1, 1980 stocks of 340 million bushels.

The U.S. oat supply for the 1981/82 season beginning June 1, 1981 was projected by the USDA at 675 million bushels vs. 695 million bushels estimated in 1980/81. Beginning stocks were projected at 161 million bushels (off 32 percent from the previous season) and production was projected at 514 million bushels (up 12 percent from 1980/81). Oats prices were projected to average $1.50–$1.80 per bushel during the 1981/82 marketing year.

Government Support Program

The 1981 crop national average regular loan level for oats is $1.24 per bushel, for oats grading No. 3 or better, up from $1.16 for the 1980 crop. The 1981 loan rate for oats entered into the Grain Reserve was also raised 8 cents to $1.31 per bushel from $1.23 in 1980. Oats are not included in the 1981 Feed Grain Program target provisions. There are no set-aside requirements or division programs for feed grains, including oats, in 1981.

Futures Markets

Oat futures are traded on the Chicago Board of Trade, the MidAmerica Commondity Exchange in Chicago, and the Winnipeg Commodity Exchange in Canada.

Salient Statistics of Oats in the United States & Canada

	Acreage		Yield	Farm	Farm Disposition		U.S. Government Price Support Program						Average Prices No. 2	
								Under Price Support						
Year Begin. July	Planted[2]	Harvested[3]	Per Harv. Acre	Value of Product	Feed & Seed	Sold	Owned By CCC July 1	Loans	Purch. Agree.	Total	Deliveries To CCC	Nat. Avg. Support Rate	White, Portland	Heavy Chicago
	1,000 Acres		Bushels	Mill. $	Mil. Bu.		1,000 Bushels					$ Bu.	Dollars per Bushel	
1968–9	23,342	17,708	53.7	576	592	359	45,206	89,200	5,700	89,135	35,600	.63		
1969–0	23,561	17,971	53.7	572	586	380	61,088	152,500	10,100	162,600	62,000	.63	.74	.64
1970–1	24,410	18,594	49.2	582	563	355	104,254	108,900	4,800	113,700	26,600	.54	.80	.77
1971–2	21,831	15,705	55.9	544	539	339	168,910			81,900	700	.54	.83	.74
1972–3	19,990	13,410	51.5	507	428	262	178,128			31,800	—	.54	1.02	.88
1973–4	18,605	13,770	47.9	775	404	256	104,942			10,392	—	.54	1.57	1.40
1974–5	17,013	12,608	47.6	912	389	212	24,000			3,900	—	.54	1.96	1.75
1975–6	16,486	13,038	49.0	928	397	245	5,800			3,900	—	.54	1.86	1.54
1976–7	16,734	11,834	45.7	845	353	193	—			4,600	—	.72	1.80	1.71
1977–8	17,733	13,485	55.8	825	456	295	—			82,900	1,500	1.03	1.44	1.36
1978–9	16,407	11,126	52.3	706	377	219	100			25,000	500	1.03	1.79	1.37
1979–0[1]	13,957	9,679	54.4	717	348	187	2,400			12,000	—	1.08	1.87	1.60
1980–1[1]	13,360	8,640	53.0				3,000			6,000	—	1.16	2.52	1.99
1981–2[1]	13,513											1.24		

[1] Preliminary. [2] For all purposes. [3] For grain. *Source: Statistical Reporting Service, U.S.D.A.*

OATS

World Production of Oats In Thousands of Metric Tons

Crop Year	United States	Canada	Argentina	Australia	Turkey	U.S.S.R.	W. Germany	Spain	Netherlands	Denmark	France	Sweden	Un. King.	Poland	World Total
1970–1	13,313	5,672	360	1,613	415	11,800	3,481	395	201	631	2,556	1,685	1,217	3,209	52,882
1971–2	12,792	5,605	475	1,275	455	14,650	4,120	582	213	701	3,134	1,867	1,360	3,195	57,550
1972–3	10,044	4,630	566	740	396	14,100	3,909	440	144	637	3,084	1,630	1,255	3,212	51,286
1973–4	9,681	5,041	561	1,107	376	17,516	4,155	425	134	444	2,204	1,209	1,080	3,220	53,872
1974–5	8,912	3,929	327	874	380	15,257	3,482	559	163	472	2,081	1,686	950	3,244	49,320
1975–6	9,551	4,466	433	1,141	390	12,495	3,445	609	158	367	1,948	1,345	795	2,920	47,044
1976–7	7,930	4,831	530	1,073	400	18,113	2,497	505	103	256	1,402	1,251	764	2,695	48,744
1977–8	10,901	4,303	570	991	370	18,407	2,714	421	94	288	1,928	1,416	790	2,561	51,508
1978–9[1]	8,730	3,620	676	1,868	370	18,507	3,202	542	140	210	2,195	1,550	710	2,490	51,120
1979–0[2]	7,707	2,978	525	1,500	340	16,000	2,951	445	103	130	1,735	1,590	550	2,200	44,647

[1] Preliminary. [2] Estimated. *Source: Foreign Agricultural Service, U.S.D.A.*

United States Official Oat Crop Production Reports In Thousands of Bushels

Year	June 1	July 1	August 1	September 1	October 1	December[1]	Final
1970	[2]	957,525	902,800	891,800	891,310	909,481	915,236
1971	[2]	850,960	885,049	884,642	884,642	875,775	878,079
1972	[2]	711,909	736,775	730,762	730,762	694,967	690,616
1973	[2]	716,615	707,756	702,280	702,280	663,860	659,136
1974	[2]	684,021	637,951	648,711	648,711	620,539	600,655
1975	[2]	731,431	697,834	677,754	677,754	656,862	638,960
1976	[2]	498,938	548,542	563,997	—	562,452	540,441
1977	[2]	707,074	757,589	758,669	—	747,914	752,774
1978	[2]	635,551	636,785	595,879	—	601,477	581,657
1979	[2]	509,761	530,967	531,232	—	534,386	526,551
1980	[2]	449,504	440,655	450,660	—	457,593	

[1] Preliminary. [2] No estimate. *Source: Crop Reporting Board, U.S.D.A.*

Oats Under Price Support Through the End of the Month (Cumulative Totals from Current Season's Crop) In Millions of Bushels

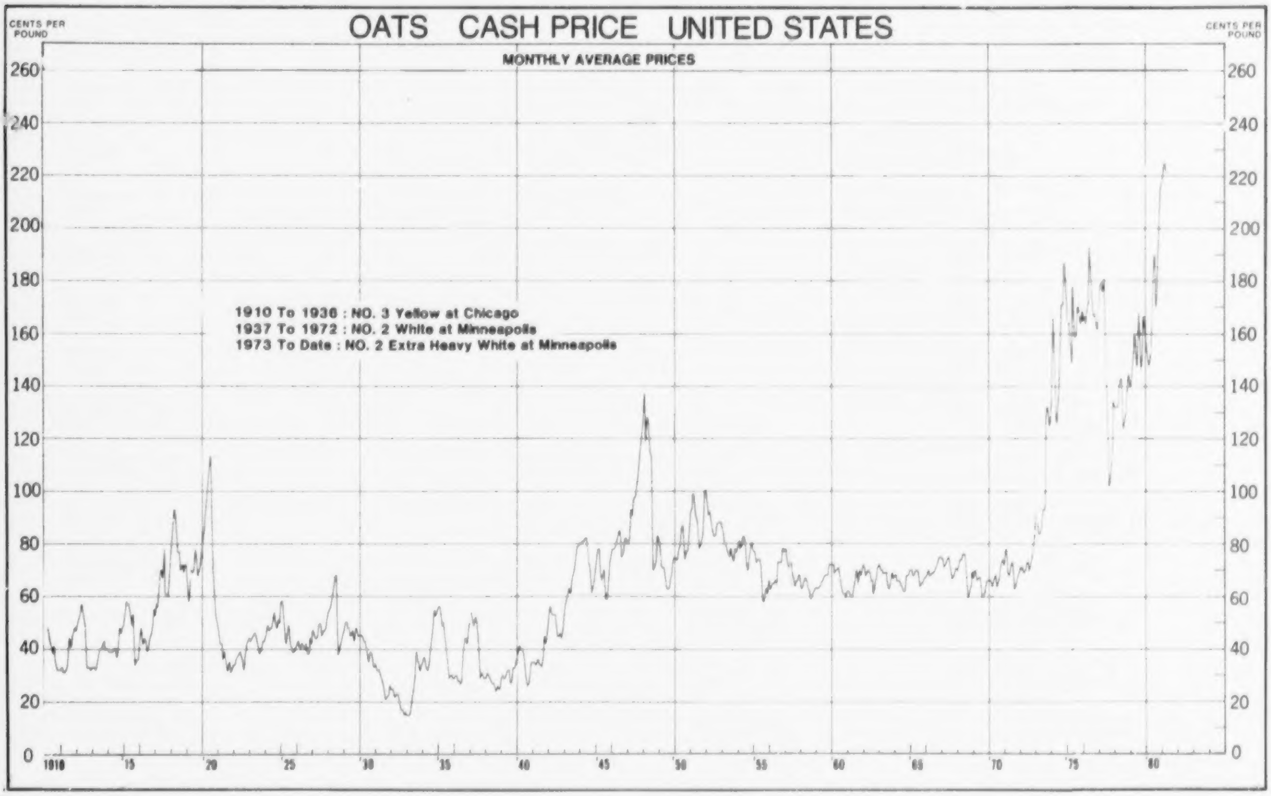
Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total
1970–1	6.7	23.8	59.1	75.2	82.3	86.9	98.2	100.7	103.1	106.7	108.5	108.9	113.7
1971–2	1.6	18.4	46.9	61.4	66.9	70.2	76.8	78.3	79.4	80.9	81.7	81.8	81.9
1972–3	.5	5.3	18.8	25.8	28.5	29.6	31.1	31.4	31.6	31.7	31.8	31.8	31.8
1973–4	.4	4.4	7.5	8.7	9.6	10.0	10.3	10.3	10.4	10.4	10.4	10.4	10.4
1974–5	.3	1.8	2.9	3.4	3.6	3.7	3.8	3.8	3.9	3.9	3.9	3.9	3.9
1975–6	.4	1.5	2.0	3.0	3.2	3.7	3.8	3.9	3.9	3.9	3.9	3.9	3.9
1976–7	.4	1.0	1.7	2.6	3.4	4.0	4.2	4.3	4.4	4.4	4.4	4.4	4.4
1977–8	7.8	30.0	48.5	54.9	59.5	62.3	65.3	67.1	73.2	76.1	77.9	78.9	78.9
1978–9	.5	8.2	14.9	18.5	21.2	22.4	23.9	24.2	24.5	24.7	24.8	24.8	24.8
1979–0	—	2.2	5.0	7.1	8.7	9.5	10.5	11.0	11.6	12.1	12.2	12.2	12.2
1980–1	—	1.8	3.4	4.4	4.9	5.7	6.0	6.1					

Source: U.S. Department of Agriculture

Average Price Received by U.S. Farmers for Oats In Cents Per Bushel

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Average[1]
1970–1	58.0	56.7	61.0	61.3	63.2	65.0	66.8	67.5	65.8	63.4	66.0	70.7	62.3
1971–2	62.6	55.5	57.4	58.1	59.5	62.2	63.8	63.6	63.8	63.5	63.8	66.6	60.5
1972–3	65.5	62.3	64.5	67.1	70.0	80.6	81.1	77.6	77.1	77.4	79.6	90.4	72.5
1873–4	85.5	113	109	114	113	120	132	144	140	124	127	130	118
1974–5	137	155	157	168	170	170	162	158	146	151	154	149	153
1975–6	145	144	145	141	140	142	144	146	146	144	147	164	146
1976–7	164	148	149	146	145	151	158	163	164	164	152	129	156
1977–8	102	92.9	93.8	104	110	113	118	122	117	119	124	116	110
1978–9	108	106	106	108	115	119	122	125	127	129	129	135	120
1979–0	133	124	129	131	141	131	139	137	134	138	143	148	137
1980–1	150	153	163	165	184	192	198	201	208	204			

[1] Weighted average by sales. *Source: Crop Reporting Board, U.S.D.A.*



Average Cash Price[1] of No. 2 Extra Heavy White Oats[2] at Minneapolis In Cents Per Bushel

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Average[1]
1968–9	65.8	60.4	62.7	64.1	68.7	67.0	70.4	69.2	66.1	66.7	67.0	61.4	64.1
1969–0	59.8	59.5	61.7	65.4	65.5	65.6	65.6	64.8	63.5	66.5	68.0	65.9	63.2
1970–1	64.1	66.6	72.4	73.0	73.9	72.3	77.5	75.4	68.8	68.1	72.6	71.5	70.9
1971–2[2]	63.0	61.8	64.0	64.0	66.0	68.0	69.0	69.0	66.0	67.0	70.0	70.0	66.0
1972–3	69.0	70.0	71.0	76.0	81.0	91.0	88.0	84.0	84.0	86.0	91.0	93.0	80.0
1973–4	93.0	128	132	126	125	132	155	166	152	126	135	143	130
1974–5	163	168	171	187	180	174	164	164	149	172	178	159	168
1975–6	159	170	168	164	169	165	167	166	164	167	172	193	166
1976–7	184	167	167	166	162	167	178	180	176	181	168	138	174
1977–8	115	102	111	117	134	132	132	132	133	140	143	136	127
1978–9	124	128	136	139	147	140	147	154	160	148	155	168	143
1979–0	160	147	155	165	167	159	152	150	148	152	162	188	157
1980–1	190	170	186	196	215	216	220	225	223				
1981–2													

[1] Weighted average of reported daily cash sales. [2] No. 2 WHITE prior to July 1971. *Source: Department of Agriculture*

OATS

Quarterly Supply and Distribution of Oats in the United States In Millions of Bushels

Year & Periods Begin. June 1	Supply				Disappearance							Stocks		
					Domestic Use									
	Beginning Stocks	Production	Imports	Total Supply	Food	Alc. Beverages	Seed	Feed	Total	Exports	Total Disappearance	Gov't. Owned[2]	Privately Owned[3]	Total Stocks
1976–7	204.8	540.4	1.4	746.6	42.7	—	45.9	484.1	572.7	9.6	582.3	—	164.3	164.3
June–Sept.	204.8	540.4	.1	745.3	14.5	—	2.3	193.8	210.6	4.9	215.5	—	529.8	529.8
Oct.–Dec.	529.8	—	.1	529.9	10.6	—	2.3	102.7	115.6	3.7	119.3	—	410.6	410.6
Jan.–Mar.	410.6	—	.6	411.2	10.7	—	9.2	132.7	152.6	.5	153.1	—	258.1	258.1
Apr.–May	258.1	—	.6	258.7	6.9	—	32.1	54.9	93.9	.5	94.4	—	164.3	164.3
1977–8	164.3	752.8	2.2	919.3	42.7	—	42.5	508.7	593.9	12.3	606.2	—	313.1	313.1
June–Sept.	164.3	752.8	1.1	918.2	14.6	—	2.1	219.3	236.0	2.7	238.7	—	679.5	679.5
Oct.–Dec.	679.5	—	.5	680.0	10.9	—	2.1	92.2	105.2	6.8	112.0	—	568.0	568.0
Jan.–Mar.	568.0	—	.4	568.4	10.3	—	8.5	126.3	145.1	1.5	146.6	—	421.8	421.8
Apr.–May	421.8	—	.2	422.0	6.9	—	29.8	70.9	107.6	1.3	108.9	—	313.1	313.1
1978–9	313.1	581.7	.7	895.5	42.0	—	36.1	524.7	602.8	12.7	615.5	2.7	277.3	280.0
June–Sept.	313.1	581.7	.3	895.5	14.8	—	1.8	224.7	241.3	7.9	249.2	1.5	644.4	645.9
Oct.–Dec.	645.9	—	.1	646.0	10.4	—	1.8	84.1	96.3	3.4	99.7	2.5	543.8	546.3
Jan.–Mar.	546.3	—	.2	546.5	10.8	—	7.2	146.2	164.2	.7	164.9	2.7	378.9	381.6
Apr.–May	381.6	—	.1	381.7	6.0	—	25.3	69.7	101.0	.7	101.7	2.7	277.3	280.0
1979–80	280.0	526.5	.9	807.4	43.4	—	34.6	488.9	566.9	4.1	571.0	2.7	233.7	236.4
June–Sept.	280.0	526.5	.3	806.8	14.5	—	1.7	221.6	237.8	.9	238.7	2.6	565.5	568.1
Oct.–Dec.	568.1	—	.2	568.3	11.1	—	1.7	76.8	89.6	1.9	91.5	2.6	474.2	476.8
Jan.–Mar.	476.8	—	.2	477.0	11.0	—	6.9	119.0	136.9	.5	137.4	2.7	336.9	339.6
Apr.–May	339.6	—	.2	339.8	6.8	—	24.3	71.5	102.6	.8	103.4	2.7	233.7	236.4
1980–1[1]	236.0	457.6	1.0	695.0	45.0	—	35.0	450.0	530.0	10.0	540.0			155.0
June–Sept.	236.4	457.6	.6	694.6	15.0	—	1.7	190.0	206.7	3.8	210.5	2.7	481.4	484.1
Oct.–Dec.	484.1	—	.2	484.3	10.0	—	2.0	78.6	90.6	2.8	93.4	2.7	388.2	390.9
Jan.–Mar.														
Apr.–May														
1981–2														

[1] Preliminary. [2] Uncommitted inventory. [3] Includes quantity under loan & farmer-owned reserve.
Source: Commodity Economics Division, U.S.D.A.

Production of Oats in the United States, by States In Millions of Bushels

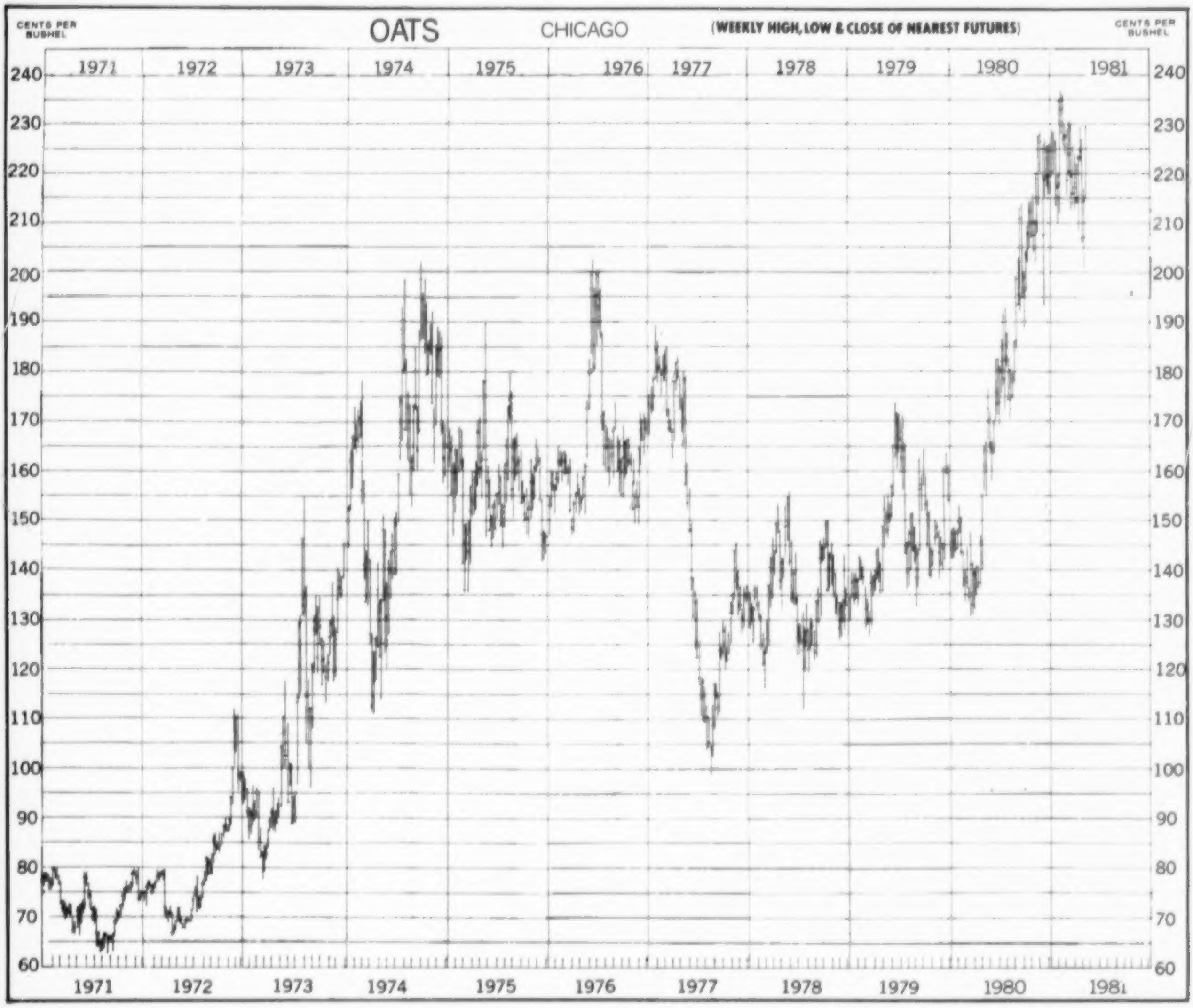
Year	Illinois	Indiana	Iowa	Michigan	Minnesota	Missouri	Nebraska	New York	No. Dakota	Ohio	Pennsylvania	So. Dakota	Texas	Wisconsin	California
1968	49.9	23.0	106.4	33.6	197.3	10.9	12.8	25.2	109.4	47.1	25.2	106.1	19.8	106.1	—
1969	42.9	19.0	93.8	27.0	190.8	5.3	24.4	20.8	153.6	36.3	19.2	109.6	25.5	104.6	—
1970	34.3	14.6	94.1	27.1	167.7	9.2	24.3	23.3	120.1	31.7	22.5	102.3	29.0	106.3	—
1971	34.8	18.9	91.5	19.5	177.0	11.3	26.4	20.5	113.6	36.7	20.8	128.4	6.0	95.2	—
1972	27.7	12.1	71.3	17.6	126.9	6.9	19.1	12.6	105.6	22.4	17.4	98.0	9.7	74.3	—
1973	19.8	11.8	67.0	16.5	145.4	1.4	21.1	18.5	73.8	25.9	18.4	100.6	26.7	56.2	—
1974	23.1	10.1	78.4	19.3	101.0	4.0	25.1	20.7	44.1	29.5	20.3	81.1	8.1	85.4	—
1975	24.9	12.4	75.5	20.7	104.0	3.3	28.9	20.4	56.2	30.9	19.9	98.1	19.5	74.3	—
1976	22.4	10.2	82.6	19.6	94.8	5.4	27.7	17.3	44.8	28.5	18.1	42.6	14.4	55.0	—
1977	20.7	8.0	82.4	18.7	161.8	7.3	40.6	15.4	60.0	24.8	18.6	132.3	24.0	76.1	5.3
1978	15.4	7.3	60.9	23.4	98.8	1.3	21.2	17.7	62.6	20.7	18.0	95.8	13.8	62.7	3.8
1979	15.6	6.4	63.0	18.9	84.9	2.0	21.2	18.0	37.0	20.3	18.4	94.4	16.8	55.9	4.6
1980[1]	14.0	5.9	62.0	20.1	82.7	2.0	15.2	17.9	13.5	19.4	19.0	66.0	12.6	58.7	4.3
1981															

[1] Preliminary. December estimate. *Source: Crop Reporting Board, U.S.D.A.*

Month End Open Interest of Oats at the Chicago Board of Trade & Winnipeg Grain Exchg.

Year	Chicago (In Millions of Bushels)												Winnipeg (In Contracts)			
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Mar.	June	Sept.	Dec.
1978	13.4	16.8	16.2	23.1	23.9	22.6	34.8	42.9	49.6	56.3	35.2	29.6	1,765	2,553	3,235	2,213
1979	31.1	32.8	24.4	29.8	25.4	28.8	27.0	32.2	29.2	28.6	26.2	25.8	2,515	2,778	3,085	2,635
1980	23.8	23.2	17.5	23.2	21.2	25.8	35.3	41.3	41.3	39.5	37.6	27.6	2,827	2,315	3,178	3,598
1981	36.2	36.7	27.0	25.2									3,295			

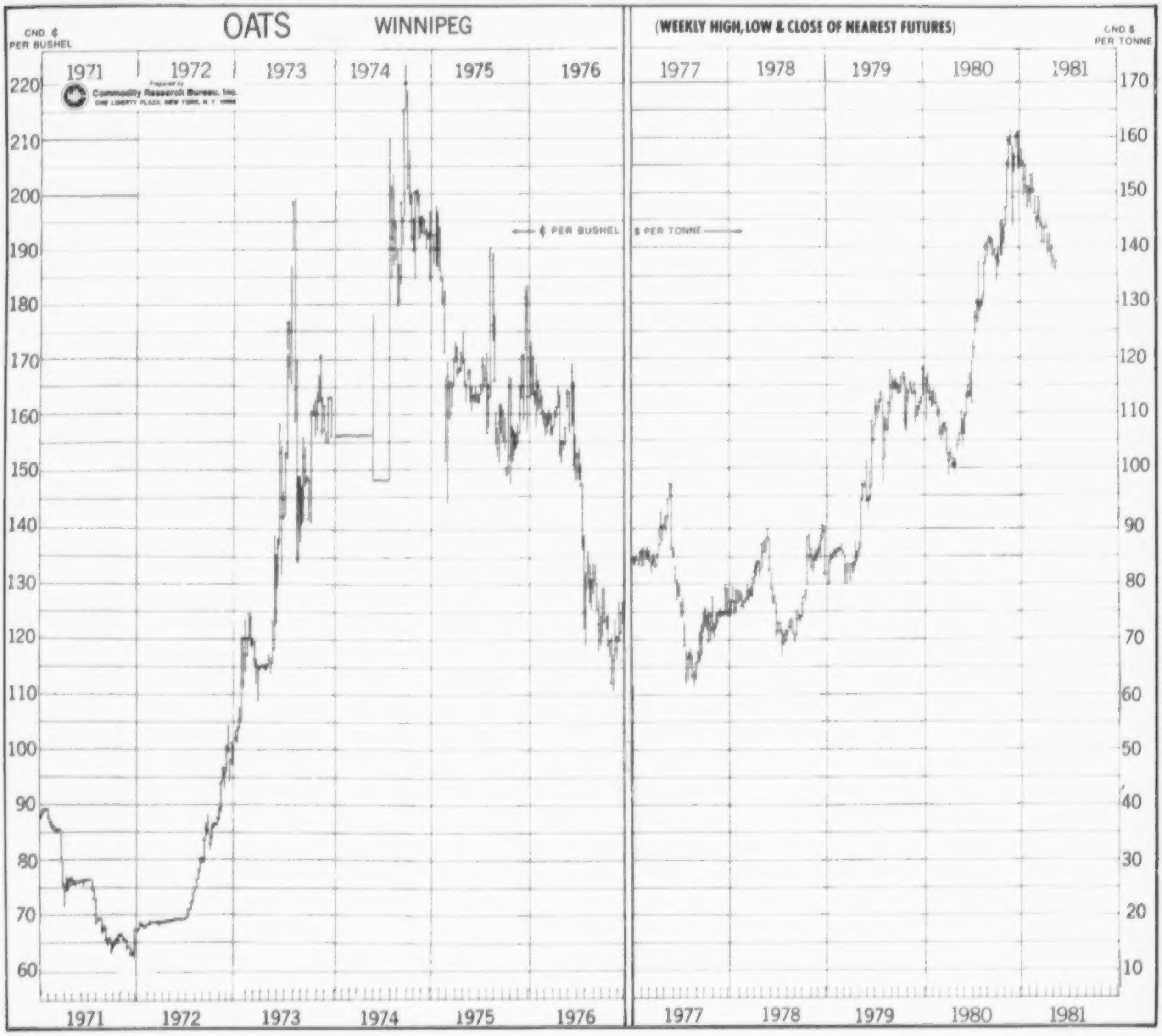
Source: Chicago Board of Trade & Winnipeg Grain Exch.



High, Low & Closing Prices of the May Oats Futures at the Chicago Board of Trade In Cents per Bushel

Year of Delivery		Year Prior to Delivery								Delivery Year					Life of Delivery Range
		May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	
1978	High	—	—	136½	130	136¾	140	146	143	138¾	136½	146½	153¼	146½	153¼
	Low	—	—	120¾	115	127	129½	134	133	128	122	123	136	132¼	115
	Close	—	—	120¾	129½	133¼	134¾	140	138	135	122½	142	138	143	—
1979	High	172	163	154	148¼	155	162¼	158¾	152	147½	152½	142¾	144½	155	172
	Low	164	144	138	137½	144½	148½	146½	140½	137¼	137	133½	135½	138	133½
	Close	164	147¾	148½	145½	151½	155	148½	140½	142¾	137¾	137	138¼	148¾	—
1980	High	173½	196	189½	180¾	181	184½	172¼	172	169¾	162	153	147	171	196
	Low	169½	169¼	162¼	164	167	160	161	163¼	152½	144½	131	133¼	147	131
	Close	170½	184½	166	178	177¾	165¼	168	168¾	154¾	148	133¼	146½	168	—
1981	High	189	191	219½	217½	227	228	244½	244	232½	237	225¾	229½		
	Low	181	179½	189	197½	207½	210	216½	210½	210½	212	206½	206		
	Close	183	189	212½	217	218	221	243½	226¾	216¼	224¼	223	213		
1982	High														
	Low														
	Close														

Source: Chicago Board of Trade



Volume of Trading in Oats Futures at Chicago Board of Trade[1] In Millions of Bushels

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total
1968–9	83.2	62.8	52.3	43.8	47.5	51.5	54.9	74.3	59.4	63.9	55.0	44.6	693.0
1969–0	43.0	51.3	57.8	66.3	55.8	58.0	42.9	37.3	31.3	34.0	27.1	31.2	536.0
1970–1	32.6	64.8	55.1	35.4	28.1	45.3	20.6	15.9	24.7	22.6	14.3	25.5	384.9
1971–2	21.2	19.1	15.7	17.7	15.9	15.4	17.0	14.2	16.1	23.0	12.3	8.0	195.6
1972–3	19.4	22.3	19.7	12.1	16.2	39.0	28.1	30.5	26.5	30.4	73.9	123.1	441.2
1973–4	134.1	173.0	106.7	108.5	449.9	70.0	75.6[1]	86.5	96.4	83.3	91.7	80.5	1,556.2
1974–5	86.5	106.4	86.8	71.6	59.5	59.4	73.9	57.2	54.7	69.9	82.9	64.3	873.1
1975–6	71.6	74.7	62.2	53.8	56.8	50.7	37.9	41.5	39.8	25.4	44.7	82.0	641.1
1976–7	95.0	72.9	64.5	44.1	44.5	32.2	39.3	39.5	41.6	44.9	41.8	54.2	614.5
1977–8	53.8	55.3	44.6	35.0	66.1	33.8	31.4	37.7	59.7	80.2	68.8	98.5	664.9
1978–9	103.8	121.3	120.0	149.0	141.0	67.7	59.3	93.9	51.6	95.4	87.1	135.7	1,225.3
1979–0	127.8	111.6	76.1	98.6	96.0	47.1	56.9	85.3	53.8	81.1	131.5	144.8	1,110.6
1980–1	200.4	183.9	199.6	197.1	167.9	151.0	124.8	170.2	129.2	136.4			
1981–2													

[1] Data prior to Jan. 1974 are for ALL CONTRACT MARKETS IN THE U.S. *Source: Chicago Board of Trade*

Olive Oil

World production of olive oil in 1980/81 was estimated at 1.798 million tonnes by the Foreign Agricultural Service (FAS) of the USDA. The increase of 398,000 tonnes above estimated 1979/80 world production followed substantial production increases in all major producing countries. The FAS forecast production in Italy, the largest producing nation, at 625 million tonnes, 31 percent above the previous season's frost-damaged crop. Production gains were also expected in Greece, Turkey, and Tunisia. Among major world producers, only production in Spain was expected to decline.

The entry of Greece on January 1, 1981, into the European Economic Community (EC) was expected to result in increased Greek government support prices and to EC subsidies. These factors are at least partly responsible for the expected record-large Greek production. The admission of Greece into the EC should alter the distribution of world olive oil production, increasing the EC share of world production from 35 percent before January 1, 1980 to over 50 percent.

Because expected increased world consumption may not absorb the anticipated higher production, world olive oil stocks could increase by as much as 700,000 tonnes.

Prices in early 1981 dropped almost 10 percent from late 1980 levels in response to the above-mentioned production developments.

U.S. imports for 1980 were estimated by the FAS at 26 thousand metric tonnes.

World Production of Olive Oil (Pressed Oil)[2] In Thousands of Metric Tons

Crop Year[3]	Algeria	Greece	Italy	Jordan	Lebanon	Argentina	Morocco	Portugal	Spain	Syria	Tunisia	Turkey	Yugoslavia	Israel	World Total
1968–9	18	154	384	9	5	12	50	53	480	22	55	126	2	1	1,384
1969–0	22	156	473	1	7	10	20	82	358	26	25	50	1	4	1,254
1970–1	13	186	429	1	3	21	15	82	475	15	90	110	1	1	1,430
1971–2	23	186	616	1	11	9	68	42	341	22	167	51	1	1	1,568
1972–3	15	249	340	6	7	28	21	48	440	33	70	154	1	2	1,422
1973–4	16	192	543	—	8	22	30	42	447	14	130	53	1	—	1,520
1974–5	8	237	433	7	14	19	26	48	333	44	117	110	2	—	1,414
1975–6	18	257	633	1	5	17	38	36	455	33	180	96	4	5	1,788
1976–7	15	224	301	5	12	12	30	36	390	56	85	150	4	—	1,334
1977–8	5	231	689	9	3	17	15	30	400	38	125	60	4	1	1,620
1978–9	14	235	415	10	10	17	26	40	500	56	70	160	—	1	1,554
1979–0[1]	10	204	475	5	3		34	51	417	20	85	52			1,390
1980–1[3]	18	275	625	12	7		24	45	400	15	150	165			1,788
1981–2															

[1] Preliminary. [2] Total pressed oil in marketing year ending Oct. 31; excludes sulfur oil extracted from residues. [3] Forecast.
Source: Foreign Agricultural Service, U.S.D.A.

Wholesale Price of Olive Oil (Imported, Edible), in Drums at N.Y. In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1968	38.7	38.7	38.7	38.7	38.7	38.7	38.7	38.7	38.7	38.7	38.7	38.7	38.7
1969	38.7	38.7	38.7	38.7	38.7	38.7	38.7	38.7	38.7	38.7	38.7	38.7	38.7
1970	38.7	38.7	40.3	40.7	40.7	40.7	40.7	40.7	39.3	39.3	39.3	39.3	40.0
1971	39.3	39.3	39.3	39.3	39.3	39.3	39.3	42.7	42.7	42.7	42.7	42.7	40.7
1972	42.7	42.7	42.7	42.7	42.7	42.7	42.7	42.7	42.7	42.7	42.7	42.7	42.7
1973	42.7	42.7	42.7	42.7	42.7	42.7	42.7	42.7	N.A.	54.5	90.0	86.7	51.3
1974	86.7	86.7	86.7	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	92.7	92.7	92.5	89.6
1975	110.7	116.7	116.7	116.7	116.7	116.7	116.7	112.0	116.7				112.7
1976	103.3	103.3	103.3	103.3	103.3	103.3	103.3	103.3	86.7	86.7	86.7	86.7	97.8
1977	86.7	86.7	86.7	86.7	86.7	86.7	86.7	86.7	86.7	86.7	86.7	86.7	86.7
1978	86.7	86.7	86.7	86.7	86.7	86.7	86.7	86.3	83.3	83.3	83.3	83.3	85.5
1979	83.3	83.3	83.3	83.3	83.3	83.3	83.3	83.3	83.3	83.3	83.3	83.3	83.3
1980	62.5	78.1	83.3	83.6	85.6	87.1	85.5	86.3	87.5	86.5	87.5	87.5	83.4
1981													

Source: Economic Research Service, U.S.D.A.

Onions

Salient Statistics of Onions in the United States

Crop Year	Stocks—Jan. 1 (1,000 Cwt.) Common Storage	Cold Storage	Total Stocks	Acres Harvested (Acres)	Yield Per Acre (Cwt.)	Production (1,000 Cwt.)	Price Per Cwt. (Dollars)	Farm Value ($1,000)	Domestic Exports[3] (1,000 Cwt.)	Imports[2] (1,000 Cwt.)	Per Capita[2] Consumption Farm Wt. (Lbs.)	Frozen
1968	4,609	202	4,811	105,920	272	28,769	3.60	92,390	1,193	514	11.9	.16
1969	5,301	214	5,515	100,000	282	28,234	4.13	107,450	1,514	837	12.5	.18
1970	4,351	185	4,536	101,000	302	30,493	3.67	98,752	1,398	500	11.9	.25
1971	5,470	180	5,650	98,800	302	29,803	3.88	105,330	1,269	590	10.1	.34
1972	4,810	170	4,980	94,470	300	28,355	6.48	167,715	1,340	1,458	9.9	.51
1973	3,961	77	4,038	104,990	283	29,689	7.57	207,226	1,773	1,079	9.2	.53
1974	4,754	81	4,835	109,730	302	33,151	4.87	147,182	1,553	909	10.5	.49
1975	5,109	80	5,189	103,080	305	31,418	9.35	266,230	1,758	696	9.8	.59
1976	4,430	88	4,518	109,220	322	35,197	6.92	216,356	3,169	1,403	10.1	.66
1977	5,126	98	5,224	107,950	319	34,406	6.76	203,432	1,941	1,345	10.1	.69
1978[1]	5,620	63	5,683	121,220	296	35,936	7.82	250,375	3,293	2,778	10.6	.72
1979[1]	6,456	66	6,522	123,110	311	38,330	6.99	236,353			11.8	.75
1980[1]	7,650	99	7,749	115,030	308	35,469	9.39	295,814				
1981[1]	5,447	78	5,525									

[1] Preliminary. [2] Onions and shallots. Includes 0.1 pounds of shallots in each year. [3] Year beginning July.
Source: Economic Research Service, U.S.D.A.

Production of Onions in the United States In Thousands of Hundredweight (Cwt.)

Year	Spring Texas	Spring California	Spring Arizona	Spring Total (All)[2]	Summer New Mexico	Summer Texas	Summer California	Summer Colorado	Summer Idaho	Summer Michigan	Summer Minnesota	Summer New York	Summer Oregon	Summer Total (All)	Grand Total
1968	2,472	1,740	992	2,742	432	3,262	5,298	1,769	1,968	2,242	265	3,752	4,342	20,217	28,769
1969	3,045	1,652	750	2,402	368	2,942	5,896	1,760	1,684	2,010	225	3,762	2,134	19,928	28,234
1970	3,300	1,888	864	2,752	328	2,872	5,874	1,711	1,978	2,208	221	4,760	2,115	21,569	30,493
1971	3,420	1,508	570	5,498	300	2,875	7,142	1,475	4,281[3]	1,674	240	4,123	[3]	21,430	29,803
1972	2,975	1,881	645	5,501	285	2,846	6,452	1,709	2,184	2,144	252	2,300	3,392	20,008	28,355
1973	3,120	1,512	768	5,400	1,073	1,820	6,384	1,392	2,475	2,046	271	2,992	3,927	24,259	29,689
1974	3,570	1,809	820	6,199	1,122	1,586	8,580	1,479	2,070	2,139	281	3,973	3,576	26,846	33,151
1975	2,975	1,587	686	5,248	1,005	1,404	9,180	1,643	2,025	1,768	165	3,443	3,567	26,170	31,418
1976	4,800	1,652	720	7,172	1,340	1,881	7,215	2,183	2,915	2,166	172	3,631	4,433	28,025	35,197
1977	2,789	1,967	616	5,372	1,040	1,870	8,453	2,040	2,412	2,095	218	4,057	4,287	29,034	34,406
1978	3,345	1,590	738	5,673	1,184	1,502	8,250	2,730	2,470	2,448	223	4,309	4,187	30,263	35,936
1979	3,504	1,904	536	5,944	960	1,520	9,504	2,535	2,295	2,414	125	4,818	4,776	32,386	38,330
1980[1]	3,569	1,683	623	5,875	1,131	1,764	8,400	2,460	2,385	1,625	201	4,433	4,515	29,594	35,469
1981[1]	3,549														

[1] Preliminary. [2] Total "Spring" after 1971. Prior add "Texas" for total Spring. [3] Includes "E. Oregon."
Source: Crop Reporting Board, U.S.D.A.

Cold Storage Stocks of Onions (Fresh) in the United States In Thousands of Pounds

Year	Jan. 1	Feb. 1	Mar. 1	April 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1968	20,168	21,203	16,988	4,812	1,153	1,091	860	535	267	5,157	17,911	21,289
1969	21,397	24,261	21,899	17,084	5,650	2,606	1,642	716	390	2,521	8,481	15,772
1970	18,467	18,797	14,872	5,541	969	2,220	1,694	722	893	5,849	13,305	15,420
1971	18,018	19,340	15,053	7,685	2,359	862	1,436	680	558	3,368	10,638	11,729
1972	17,032	16,135	13,526	8,924	1,961	1,339	416	421	666	3,118	6,848	8,911
1973	7,685	8,326	6,003	3,797	359	740	403	690	781	1,798	6,534	8,446
1974	8,061	9,510	6,617	2,952	635	870	521	315	323	3,378	6,296	8,572
1975	8,142	6,807	3,937	3,291	1,865	1,884	538	277	290	3,456	7,214	9,122
1976	8,886	7,632	5,569	2,087	2,005	2,172	4,187	2,271	2,332	837	4,563	8,586
1977	9,829	8,611	8,824	5,034	905	603	537	44	884	2,766	3,922	7,285
1978	6,336	3,981	1,744	1,360	1,127	954	538	2,159	2,607	1,535	3,656	5,201
1979	6,584	6,023	5,400	2,967	2,107	1,254	844	800	253	1,747	1,487	4,298
1980[1]	9,913	8,446	6,430	4,070	1,124	442	1,967	954	1,298	2,089	2,265	4,901
1981[1]	7,777	6,972	4,422	3,730								
1982												

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

World Production of Onions In Thousands of Metric Tons

Year	Brazil	Egypt	India	Italy	Japan	South Korea	Mexico	Netherlands	Poland	Romania	Spain	Turkey	Yugoslavia	United States	U.S.S.R.	World Total
1976	430	652	2,206	496	1,123	131	280	355	332	321	860	760	322	1,597	1,135	14,059
1977	489	723	2,164	518	1,120	159	306	590	367	358	1,195	845	375	1,561	1,016	15,336
1978	462	599	2,250	520	1,114	165	332	522	431	400	930	880	343	1,630	1,400	15,624
1979	691	560	2,100	487	1,254	393	343	457	334	380	930	1,000	293	1,462	1,400	15,732
1980[1]	685	580	2,400	478	1,112	275	315	413	350	370	921	1,100	280	1,329	1,200	15,278
1981																

[1] Preliminary. *Source: Foreign Agricultural Service, U.S.D.A.*

Average Wholesale Price of Onions at Chicago[1] In Dollars Per Hundred Pounds (CWT)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1968	6.53	6.71	11.31	11.06	6.87	5.27	5.13	6.18	5.37	4.36	4.44	4.34	6.46
1969	4.28	3.90	3.20	4.28	4.09	5.20	6.83	5.75	5.74	5.31	6.43	6.33	5.11
1970	6.81	8.69	7.77	7.04	5.89	6.40	6.94	5.60	4.43	4.53	4.02	4.62	6.06
1971	4.29	4.94	6.54	7.11	5.26	5.97	6.50	7.24	5.35	6.06	5.75	5.51	5.88
1972	6.16	6.20	5.10	5.69	6.75	8.58	12.03	11.88	9.33	7.31	9.50	8.38	8.08
1973	9.69	11.31	19.75	33.00	21.33	11.50	11.20	9.19	3.30	3.92	4.33	4.31	11.90
1974	5.03	6.05	4.16	3.79	4.03	7.81	8.63	9.83	9.19	7.80	7.04	5.97	6.61
1975	5.46	4.85	9.16	16.13	14.75	15.63	27.83	20.08	13.00	10.80	10.69	14.43	13.57
1976	15.05	11.50	9.21	12.17	13.20	12.50	8.75	8.67	8.14	7.92	7.38	8.71	10.27
1977	11.00	16.46	21.75	23.70	17.67	12.67	12.50	13.00	8.65	8.13	8.08	8.13	13.48
1978	7.47	7.44	13.08	17.25	9.67	12.92	14.56	14.25	10.50	9.58	9.56	10.56	11.40
1979	9.44	15.08	11.75	10.25	12.50	19.50	20.65	14.05	11.10	9.31	8.54	7.15	12.44
1980	7.75	7.04	6.75	9.00	20.00	20.50	14.63	13.50	13.50	12.67	11.25	14.70	12.61
1981	18.17	20.00											
1982													

[1] All yellow, all varieties, fair to good quality, U.S. No. 1, all sizes and field run, track and street sales.
Source: Bureau of Labor Statistics (0113–0216)

Average Price Received by Farmers for Onions in the U.S. In Dollars Per CWT.

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Season Average
1968	4.91	5.75	8.68	8.71	4.88	3.58	4.51	3.98	3.71	3.57	3.43	3.18	3.60
1969	2.83	2.41	2.51	2.92	3.55	3.68	4.68	4.30	4.19	4.20	4.45	4.68	4.13
1970	6.36	6.95	6.82	6.41	4.71	5.15	4.98	3.88	3.29	3.10	3.04	2.94	3.67
1971	3.40	3.14	3.52	3.73	3.79	4.18	4.43	4.87	4.39	4.66	4.27	4.65	3.88
1972	4.64	4.08	3.85	4.49	5.48	6.62	8.21	8.17	6.91	6.33	6.53	6.91	6.48
1973	9.43	11.90	17.50	23.70	13.00	8.51	7.39	6.23	5.57	5.97	6.97	7.23	7.57
1974	10.40	10.50	6.30	4.85	4.79	5.24	6.07	7.11	6.34	5.39	4.57	4.27	4.87
1975	3.90	4.61	7.59	12.30	10.60	12.70	17.70	14.20	11.70	9.72	9.80	11.50	9.35
1976	11.10	8.85	6.95	7.20	6.17	5.49	5.65	5.38	5.73	5.34	5.51	6.97	6.52
1977	11.50	14.00	19.40	19.40	10.40	9.00	8.57	6.88	6.40	6.49	6.39	5.50	10.33
1978	4.95	4.76	7.79	12.10	7.50	7.64	9.85	9.14	7.13	6.44	7.05	9.53	7.82
1979	11.00	12.20	9.57	9.70	8.10	11.40	13.30	9.74	7.93	6.45	6.27	5.57	9.27
1980[1]	4.50	4.20	5.30	6.83	9.86	10.50	9.32	10.50	11.30	10.30	11.50	14.10	9.02
1981[1]	15.40	17.20	23.50	25.90									
1982													

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

Oranges and Orange Juice

The net pack of FCOJ (frozen concentrated orange juice) in Florida for the 1979/80 season which ended November 1980, amounted to a record-large 231.3 million gallons, up 34 percent from the 173.0 million gallons produced in the previous season. The 1979/80 Florida orange crop of 206.7 million boxes was a record large 26 percent above the 1978/79 crop. A total of 173.2 million boxes of Florida oranges were used for frozen concentrates in 1979/80, up from 129.1 million in the previous season, while the yield of FCOJ per box decreased from 1.34 gallons to 1.33 gallons. A total of 82.2 percent of the Florida orange harvest was used for the production of frozen concentrates vs. 77.2 percent in 1978/79.

Imports of FCOJ declined to about 18.1 million gallons in 1979/80 from 30 million in the previous season. Florida processors, during calendar 1979, exported 11.5 million gallons of 45 degree Brix concentrate, compared with 9.3 million gallons the previous season. Canada is the largest single U.S. customer.

FCOJ movement during the 1979/80 season amounted to about 239.0 million gallons, up from about 210.0 million the previous season. However, because of the sizable increase in supply, ending stocks rose to 54.8 million gallons from 37.4 million at the end of the previous season. (The Brix level was reduced to 43.4 degrees from 45.0 degrees, effective at the start of the new marketing season (1980/81) on December 1, 1980.

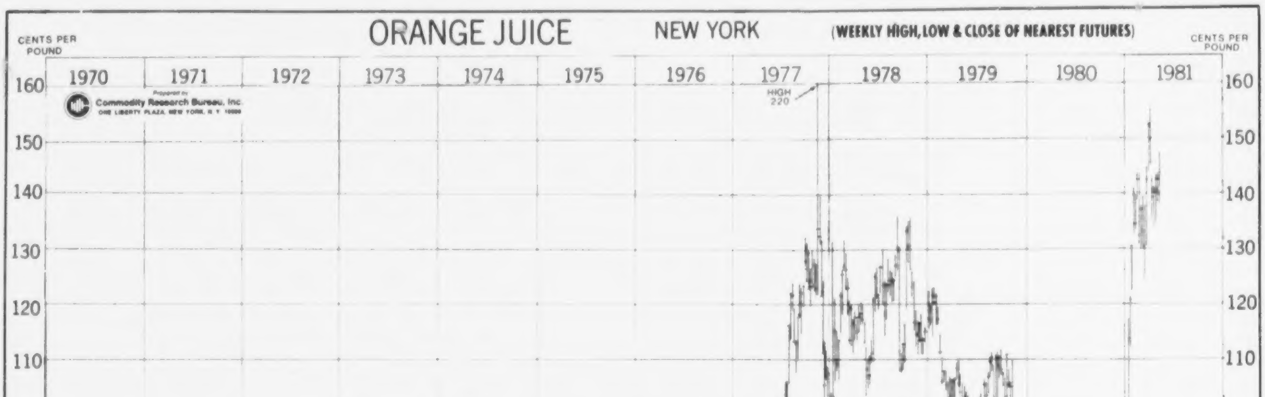
Hard freezes in the Florida citrus belt in the early mornings of January 13 and 14, 1981, and in some previously untouched areas on January 18, changed the complexion of the 1980/81 FCOJ market virtually overnight. The 11 percent drop in the February 1981 USDA Florida orange crop estimate from the January estimate brought the 1980/81 Florida FCOJ pack potential down to 167 million gallons or less from an estimated pre-freeze total of 232 million gallons.

Thus, even with the large 1980/81 beginning stocks of FCOJ and prospects for much larger imports from Brazil, the net effect of the freeze was expected to be a slightly smaller supply of FCOJ in the 1980/81 season ending November 30, 1981 than in the previous season.

In response to the mid-January 1981 freeze, canners' list prices for unadvertised brands of FCOJ soared from as low as $2.70 per dozen 6-ounce cans during the January promotion to $4.45 per dozen. This compared with $3.55–$3.60 a year earlier.

Futures Market

Frozen concentrated orange juice (FCOJ) futures are traded on the Citrus Associates of the New York Cotton Exchange.



World Production of Oranges (Including Tangarines) In Thousands of Metric Tons

Season	Algeria	Argentina	Brazil	Australia	Greece	Israel	Italy	Japan	Mexico	Morocco	Spain	Turkey	South Africa	United States	World Total
1970–1	451	1,255	2,132	315	421	1,076	1,599	2,994	1,405	753	2,005	513	481	7,875	24,715
1971–2	510	976	2,760	376	390	1,148	1,766	2,885	1,114	821	2,179	535	567	7,889	25,529
1972–3	515	1,032	2,872	338	400	1,221	1,604	4,070	1,270	988	2,642	563	534	9,245	28,932
1973–4	520	1,063	3,782	369	422	1,233	1,891	3,864	1,089	819	2,460	554	545	8,931	29,333
1974–5	480	1,014	4,065	438	539	1,016	2,098	3,952	1,110	583	2,479	622	499	9,913	30,660
1975–6	480	958	4,065	389	567	995	1,931	4,234	905	552	2,643	645	564	10,170	30,918
1976–7	506	990	3,754	391	533	968	2,258	3,575	1,283	784	2,489	671	463	10,144	30,567
1977–8	508	990	4,321	352	455	949	1,950	4,120	750	1,070	1,914	785	600	9,268	28,479
1978–9		925	6,471	384	506	981	1,699	3,633	740	863	2,526	806	521	8,885	30,060
1979–0[1]		926	5,426	393	315	934	1,938	4,176	1,132	933	2,490	820	593	11,031	32,315
1980–1[2]					632	968	2,160	3,319	1,645	942	2,506	810		11,477	

[1] Preliminary. [2] Estimate. *Source: Foreign Agricultural Service, U.S.D.A.*

Salient Statistics of Oranges in the United States

Season	Production[2]					Farm Price $ Per Box	Farm Value Million $	Foreign Trade[3]		Quantities Processed	Florida Crop Processed					
													Chilled Pdt's			
	Arizona	California	Florida	Texas	Total			Domestic Exports	Imports		Frozen Concentrates	Juice	Sections & Salads	Other Processed	Total Processed	Yield Per Box (Gall.)
	Million Boxes							Million Boxes								
1969–0	4.6	39.0	137.7	4.2	185.8	2.09	388.0	6.8	.9	141.0	100.7	18.6	.8	8.2	128.4	1.24
1970–1	3.6	37.5	142.3	6.2	189.4	2.45	465.1	6.2	1.1	145.4	103.5	19.8	.7	8.8	132.8	1.21
1971–2	4.9	43.4	137.0	6.2	191.5	2.87	549.4	7.7	1.1	148.0	104.4	19.5	.5	7.7	132.2	1.29
1972–3	5.1	42.1	169.7	7.8	224.7	2.87	549.4	7.1	1.2	182.3	132.2	20.5	.6	8.9	162.3	1.33
1973–4	3.4	40.4	165.8	6.6	216.2	2.69	603.3	8.2	1.1	171.3	132.5	20.4	.6	7.5	161.0	1.30
1974–5	5.0	55.1	173.3	4.5	237.8	2.78	600.7	12.6	.9	183.6	135.5	22.8	.5	7.6	166.4	1.31
1975–6	2.7	52.8	181.2	6.1	242.8	2.75	653.8	11.6	.5	192.5	144.5	24.0	.6	7.6	176.7	1.29
1976–7	4.0	45.3	186.8	6.9	243.0	2.80	678.7	10.7	1.1	195.8	148.7	27.3	.4	8.8	185.2	1.07
1977–8	2.6	42.6	167.8	6.1	220.1	3.34	811.2	8.9	.6	175.5	132.2	25.3	.4	8.1	166.0	1.23
1978–9[1]	2.9	37.3	164.0	6.4	210.6	5.45	1,198.7	7.8	.6	170.5	130.2	22.8	.3	6.5	159.8	1.34
1979–0[1]	3.5	59.6	206.7	4.0	273.8	6.15	1,296.0				174.9	24.4	.3	7.0	206.6	1.33
1980–1[1]	3.1	64.0	171.6	4.4	243.1	4.76	1,304.2									1.19

[1] Preliminary. [2] Fruit ripened on trees, but destroyed prior to picking is not included. [3] Year beginning Nov. 1.
Source: Economic Research Service, U.S.D.A.

U.S. Cold Storage Stocks of Orange Juice Concentrate[2] In Millions of Pounds (Gallon Equivalent)

Year	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1969	188.8	256.4	331.2	373.0	410.6	505.7	610.6	547.2	478.2	383.6	293.7	239.4
1970	281.2	401.6	505.0	482.5	538.1	711.1	783.1	677.7	579.8	473.3	355.7	284.7
1971	323.7	462.8	573.3	581.6	574.5	642.9	684.3	603.1	535.4	450.5	347.3	262.2
1972	289.4	391.7	484.6	540.7	578.3	688.6	764.5	748.8	646.9	528.3	437.0	343.0
1973	353.5	468.5	633.7	768.8	830.6	909.5	1,074.6	1,089.1	999.1	829.8	709.6	598.1
1974	641.9	779.1	935.9	1,025.9	1,121.4	1,239.9	1,319.7	1,228.9	1,031.7	917.8	737.4	616.9
1975	654.6	802.1	967.3	985.4	1,032.1	1,246.8	1,294.0	1,153.4	981.7	856.6	696.7	633.2
1976	756.6	943.0	1,046.9	1,016.1	1,075.8	1,203.7	1,339.9	1,229.1	1,075.4	877.1	740.3	605.2
1977	613.6	681.4	845.5	932.8	955.5	1,040.6	914.3	806.5	647.1	551.7	456.3	333.3
1978	392.8	511.5	617.1	617.3	744.4	854.7	883.1	811.6	720.2	549.6	485.4	359.8
1979	506.5	762.3	996.6	995.0	1,044.4	1,186.5	1,228.4	1,116.4	926.2	704.6	560.1	466.6
1980[1]	559.0	827.2	1,062.5	1,124.8	1,221.4	1,429.7	1,500.3	1,369.3	1,182.4	963.7	842.7	679.5
1981[1]	722.4	905.3	1,053.2	1,181.0								

[1] Preliminary. [2] Adjusted to 45° BRIX basis (10.027 lbs. per gallon). *Source: Crop Reporting Board, U.S.D.A.*

Volume of Trading of Frozen Concentrated Orange Juice Futures In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	32,409	25,867	29,847	16,858	23,331	26,682	23,252	20,257	25,430	28,087	20,121	12,264	284,405
1979	25,080	17,387	15,162	11,378	11,661	15,526	14,326	16,014	15,010	15,141	12,889	15,239	184,813
1980	21,982	13,010	22,555	9,337	6,742	7,914	8,308	9,715	11,800	16,276	13,042	22,183	162,864
1981	35,041	32.755	49,107	37,403									

Source: Citrus Assoc. of the N.Y. Cotton Exch.

ORANGES AND ORANGE JUICE

Wholesale Price of Oranges (California) F.O.B. Packed Fresh In Dollars Per Box

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1973	7.30	7.30	7.78	7.64	6.44	6.15	6.60	6.60	7.70	7.40	7.57	7.50	7.17
1974	7.65	7.54	6.64	7.35	7.29	6.85	7.10	7.40	7.95	11.81	8.08	7.29	7.75
1975	7.30	7.54	7.33	7.48	6.93	7.10	6.93	7.04	7.63	7.11	8.60	8.66	7.47
1976	7.60	6.70	6.35	6.23	6.18	6.57	6.91	7.00	7.60	7.76	9.96	8.47	7.28
1977	7.00	7.50	7.28	7.38	7.11	7.88	7.70	8.78	9.10	9.70	12.70	11.30	8.62
1978	11.90	11.20	10.54	9.37	9.97	10.10	10.70	13.40	14.50	14.30	13.50	13.50	11.91
1979	13.50	12.29	13.68	13.19	13.58	15.98	13.50	12.40	12.40	12.83	15.24	11.10	13.31
1980	9.20	9.50	9.70	9.22	9.09	9.02	9.40	9.00	10.60	12.00	14.70	12.70	10.34
1981	10.70												

Source: Economic Research Service, U.S.D.A.

Wholesale Price of Frozen Orange Concentrate[1] In Dollars Per Dozen 6 Oz. Cans

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1973	2.159	2.159	2.159	2.159	2.106	2.159	2.106	2.106	2.106	2.159	2.159	2.159	2.141
1974	2.167	2.152	2.152	2.152	2.152	2.152	2.151	2.151	2.170	2.195	2.134	2.154	2.157
1975	2.244	2.254	2.254	2.254	2.254	2.254	2.246	2.246	2.246	2.358	2.383	2.383	2.281
1976	2.383	2.352	2.352	2.383	2.383	2.383	2.187	2.187	2.187	2.187	2.187	2.089	2.272
1977	2.040	2.776	2.752	2.752	2.752	2.910	2.910	3.101	3.223	3.223	3.459	3.508	2.951
1978	3.508	3.508	3.514	3.514	3.514	3.514	3.514	3.514	3.514	3.514	3.649	3.787	3.547
1979	3.787	3.787	3.787	3.787	3.787	3.787	3.787	3.787	3.787	3.787	3.787	3.787	3.787
1980	3.787	3.787	3.787	3.700	3.700	3.626	3.626	3.626	3.626	3.626	3.442	3.442	3.656
1981	3.373	4,078											

[1] Packer to wholesaler, distributor, or retail chain store, f.o.b. plant. *Source: Bureau of Labor Statistics* (0242–0103.04)

High, Low & Closing Prices of May Orange Juice[1] **Futures at New York** In Cents per Pound

Year of Delivery	Year Prior to Delivery										Delivery Year					Life of Delivery Range
	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	
1978 High	75.30	76.00	86.00	90.10	96.00	100.00	113.25	125.25	135.00	121.90	115.50	129.00	128.65	120.25	119.90	135.00
Low	67.55	69.50	76.00	82.60	83.80	88.80	88.60	107.50	118.60	102.40	98.00	107.60	111.40	113.55	106.65	44.50
Close	69.80	76.00	85.95	84.40	95.65	90.50	108.75	121.60	120.50	107.50	108.60	122.65	116.50	118.20	106.65	—
1979 High	98.65	89.75	88.40	92.75	95.70	95.75	100.65	129.00	128.80	121.80	127.55	124.60	109.80	110.00	106.10	129.00
Low	85.25	86.10	80.15	84.50	88.90	91.50	95.25	95.70	115.00	115.00	118.60	106.40	100.10	102.30	100.00	80.15
Close	89.30	86.60	84.25	89.00	91.90	95.60	96.20	129.00	116.25	120.80	121.70	107.25	106.25	106.20	101.35	—
1980 High	104.60	104.00	102.00	101.50	102.00	109.80	109.90	111.25	100.00	102.00	100.00	91.00	101.20	91.50	89.20	111.25
Low	94.50	96.75	97.90	92.70	95.00	102.00	101.60	97.50	95.10	97.25	87.00	83.70	88.00	86.70	86.50	83.70
Close	98.90	100.75	101.30	95.80	102.00	108.70	109.50	98.70	98.50	97.90	89.65	86.15	88.70	88.80	87.55	—
1981 High	107.80	94.75	95.50	96.90	94.55	97.50	103.00	104.45	96.15	92.20	133.50	149.50	150.20	155.10		
Low	91.35	91.50	92.80	90.60	91.10	93.45	96.80	92.45	90.25	83.30	84.00	135.25	126.80	133.70		
Close	91.35	93.00	94.40	91.10	93.20	97.50	102.20	95.00	91.80	85.00	133.35	138.40	150.20	139.60		
1982 High	149.50	151.50														
Low	136.00	140.25														
Close	146.45	148.45														

[1] Frozen concentrated orange juice. *Source: Citrus Associates of the N.Y. Cotton Exch., Inc.*

Month End Open Interest of Frozen Concentrated Orange Juice Futures In Thousands of Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	8,973	10,002	10,611	11,980	12,381	12,878	11,964	13,950	12,781	12,878	9,212	9,073
1979	7,916	8,503	6,734	7,887	7,223	8,261	8,058	8,116	6,510	7,101	8,423	10,428
1980	7,612	6,501	6,126	6,390	6,210	5,923	6,186	6,920	8,046	9,063	9,239	9,582
1981	7,980	10,787	12,018	11,354								

Source: Citrus Assoc. of the N.Y. Cotton Exch.

Palm Oil

World palm oil production for 1980 was estimated by the USDA at 4.5 million tonnes, up from 4.1 million the previous year. The USDA forecast 1981 production at 4.9 million tonnes. The continued increases in world production were led by the world's largest producer and exporter, West Malaysia. Production of palm oil in West Malaysia for 1980 was estimated by the USDA at 2.4 million tonnes, versus 2.0 million in 1979. (The USDA forecast production of 2.7 million tonnes in 1981.)

In addition to the significant expansion of West Malaysian production, two other factors have had a major influence on world palm oil trade in recent years. First, processed palm oil (rather than crude palm oil) accounts for an increasingly large percentage of world exports. (Palm oil producing nations export most of their palm oil.) Second, West Malaysia has continued to expand its exports to India, one of the world's major edible vegetable oil importers.

World Palm Oil Statistics In Thousand Metric Tons

	Production								Exports						
Year	W. Malaysia	Columbia	Indonesia	Ivory Coast	Sabah	Zaire	Nigeria	Total	W. Malaysia	Indonesia	Ivory Coast	Sabah	Zaire	Papua N. Guin.	Total
1974	942	51	351	140	88	174	491	2,605	870	282	102	88	66		1,461
1975	1,137	47	411	146	116	165	500	2,875	1,032	386	114	128	53		1,793
1976	1,261	40	434	151	131	155	500	3,059	1,207	406	92	128	40		1,927
1977	1,484	48	497	133	129	150	510	3,371	1,303	405	79	124	21	27	1,983
1978	1,640	55	525	150	146	137	515	3,591	1,365	412	73	144	10	28	2,056
1979[1]	2,033	71	600	160	155	136	500	4,085	1,746	391	50	155	—	40	2,410
1980[2]	2,382	78	650	180	178	125	520	4,552							

[1] Preliminary. [2] Projected. *Source: Economic Research Service, U.S.D.A.*

Palm Oil—U.S. Supply & Distribution In Millions of Pounds

	Supply			Utilization								Prices		
				Food Uses								¢ Per Pound		
Year Begin. Oct.	Imports	Stocks Oct. 1	Total Supply	Shortening	Margarine	Salad or Cooking Oil	Other	Total	Non Food Uses	Total Disappearance	Exports (& Shipments)	Value of[2] Imports	U.S. Ports C.I.F.	Malaya. 5% Bulk, CIF Europe
1972–3	363	93	456	299	7	9	29	344	12	356	40	9.7	12.3	13.9
1973–4	346	60	406	260	1	3	20	285	12	297	24	20.1	22.2	26.8
1974–5	757	88	845	606	16	24	37	683	9	692	27	24.2	24.7	23.9
1975–6	933	127	1,060	699	52	77	11	839	44	883	39	16.2	18.1	17.7
1976–7	661	138	813	430	48	91	11	580	30	611	57	19.8	23.8	24.0
1977–8[1]	361	131	492	253	23	50	19	346	21	367	52		26.4	
1978–9[1]	277	74	351							277	11			
1979–0[1]	206	74	280							226	7			
1980–1[1]	200	42	242							300	7			

[1] Preliminary. [2] F.O.B. importing countries. *Source: Economic Research Service, U.S.D.A.*

Average Wholesale Palm Oil Prices, CIF, Bulk, U.S. Ports In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1974	24.9	28.0	21.2	20.4	22.6	22.8	21.4	22.9	24.0	18.6	26.3	28.8	26.9
1975	31.2	27.5	28.1	28.9	24.6	23.0	20.6	21.1	18.2	22.4	19.0	17.2	22.8
1976[1]	16.8	16.4	17.0	16.0	15.9	17.4	19.5	19.0	19.7	19.4	19.4	19.6	18.1
1977	20.5	23.0	27.1	25.5	29.5	29.6	25.0	23.3	21.6	20.2	20.4	23.9	24.3
1978	23.1	25.2	27.4	28.0	28.4	30.6	31.2	28.5	29.8	30.5	30.4	31.0	28.7
1979	31.7	32.8	31.1	31.2	31.5	32.1	33.6	31.5	30.3	29.1	29.1	30.1	31.2
1980	32.0	32.4	31.8	29.6	27.8	28.1	27.6	26.5	25.5	22.3	27.1	26.9	28.1

[1] Prior to 1976 prices are for CONGO, TANK CARS, F.O.B. N.Y. *Source: Economic Research Service, U.S.D.A.*

Palm Oil Imports into the United States In Millions of Pounds

Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Total
1974–5	69.4	35.2	47.7	48.8	56.1	63.7	29.6	64.8	69.6	131.1	56.7	84.2	756.9
1975–6	100.0	142.9	112.7	68.7	109.3	70.3	63.1	44.8	57.6	44.2	55.1	64.6	933.4
1976–7	50.4	97.2	50.4	104.2	62.4	42.2	40.9	31.6	65.8	34.9	47.3	33.5	660.8
1977–8	25.7	43.6	18.0	31.4	44.2	35.2	33.4	28.6	26.4	19.1	38.8	16.5	361.1
1978–9	8.8	31.1	7.8	36.4	33.4	24.4	21.3	14.4	38.3	9.1	31.1	21.1	277.1
1979–0	30.0	22.5	30.3	45.4	8.8								

Source: Economic Research Service, U.S.D.A.

Paper

Market pulp shipments by the U.S. pulp industry far outpaced the general economy in 1980, with an 8 percent increase in volume over the 1979 level. The strong 1980 performance of the industry was primarily fueled by attractive world prices and steady export demand. Export volume of pulp in 1980 constituted 51 percent of market pulp shipments. Nevertheless, the U.S. remains a net importer of pulp and paper products. This results from heavy imports of pulp and newsprint from Canada, where U.S. paper and publishing companies have substantial interests. (Imports of pulp in 1980 represented nearly 54 percent of apparent U.S. consumption.)

Paper and board industry production in 1980

Production of Paperboard in the United States In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1968	1,980	1,955	2,043	2,035	2,052	2,055	1,890	2,095	1,927	2,044	1,889	1,926	24,504
1969	2,093	2,025	2,236	2,156	2,221	2,180	2,029	2,151	2,047	2,228	2,150	2,033	26,069
1970	2,237	2,057	2,142	2,198	2,160	2,106	1,956	2,074	1,959	2,169	2.054	1,851	25,477
1971	2,175	2,053	2,266	2,195	2,203	2,235	2,044	2,256	2,137	2,341	2,190	2,026	26,136
1972	2,278	2,271	2,510	2,310	2,539	2,427	2,246	2,523	2,276	2,543	2,439	2,162	28,522
1973	2,480	2,324	2,588	2,470	2,606	2,491	2,314	2,577	2,290	2,630	2,493	2,197	29,267
1974	2,479	2,287	2,510	2,507	2,573	2,410	2,342	2,499	2,172	2,396	2,114	1,604	28,017
1975	1,838	1,855	1,858	1,891	1,989	1,952	1,885	2,140	2,146	2,434	2,223	2,077	24,452
1976	2,318	2,266	2,542	2,472	2,438	2,456	2,195	2,402	2,145	2,419	2,280	2,028	27,960
1977[1]	2,239	2,168	2,502	2,399	2,509	2,460	2,157	2,475	2,239	2,414	2,340	2,127	28,727
1978[1]	2,230	2,211	2,494	2,368	2,559	2,541	2,278	2,513	2,374	2,543	2,440	2,172	30,275
1979[1]	2,411	2,298	2,643	2,505	2,590	2,542	2,387	2,622	2,408	2,698	2,606	2,332	31,429
1980[1]	2,738	2,576	2,777	2,570	2,661	2,608	2,393	2,592	2,526	2,681	2,622	2,310	31,054
1981													

[1] Preliminary. *Source: National Paperboard Association*

United States Production of All Woodpulp In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1968	3,139	3,044	3,270	3,180	3,277	3,207	2,997	3,290	3,053	3,360	3,190	2,898	40,892
1969	3,249	3,049	3,418	3,433	3,603	3,536	3,329	3,558	3,379	3,647	3,594	3,263	42,813
1970	3,560	3,425	3,587	3,579	3,624	3,475	3,352	3,547	3,304	3,656	3,496	3,201	43,546
1971	3,600	3,347	3,696	3,699	3,712	3,679	3,450	3,805	3,593	4,072	3,808	3,499	43,903
1972	3,866	3,765	4,041	3,893	4,013	3,942	3,766	3,991	3,668	4,123	3,876	3,662	46,767
1973	4,054	3,743	4,217	3,983	4,189	4,058	3,928	4,181	3,849	4,185	4,104	3,748	48,327
1974	4,100	3,776	4,253	4,177	4,256	4,117	3,931	4,116	3,867	4,334	3,918	3,372	48,349
1975	3,727	3,401	3,221	3,076	3,215	3,208	3,171	3,569	3,396	3,919	3,724	3,371	43,084
1976	3,935	3,850	4,155	4,082	4,124	4,061	3,713	4,076	3,613	4,123	3,966	3,336	48,804
1977[1]	3,753	3,850	4,112	3,999	4,148	4,083	3,791	4,026	3,668	4,054	3,884	3,489	49,033
1978[1]	3,944	3,642	4,149	4,101	4,100	4,109	3,672	3,848	3,878	4,051	3,954	3,628	50,020
1979[1]	3,905	3,815	4,307	4,096	4,368	4,321	4,092	4,393	4,088	4,470	4,225	3,874	50,612
1980[1]	4,390	4,152	4,496	4,243	4,447	4,307	3,965	4,334	4,186	4,319	4,230		
1981													

[1] Preliminary. *Source: Bureau of Census*

Stocks of Woodpulp at All[1] Mills in the U.S., at End of Month In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1968	785	779	756	783	795	838	797	801	746	787	775	870
1969	771	807	815	862	840	857	802	790	780	787	839	796
1970	812	811	823	832	868	867	919	904	821	872	885	917
1971	913	930	974	1,045	980	1,076	1,063	1,073	1,044	1,103	1,154	1,045
1972	1,077	1,026	1,017	1,014	954	943	907	914	866	862	839	848
1973	797	791	788	777	782	807	788	736	683	707	725	874
1974	702	686	737	745	744	764	793	792	749	816	697	1,177
1975	1,111	1,133	1,225	1,222	1,271	1,258	1,231	1,140	1,041	1,124	1,113	1,158
1976	1,076	1,083	1,032	1,101	1,106	1,215	1,126	1,081	1,051	980	1,133	1,344
1977[2]	1,020	1,045	1,132	1,132	1,145	1,175	1,185	1,188	1,098	774	784	1,356
1978[2]	1,081	1,062	1,090	1,074	1,069	898	1,014	1,048	933	999	788	760
1979[2]	858	802	834	907	939	896	884	892	781	813	834	803
1980[2]	850	843	867	922	976	971	982	1,034	960	960	1,009	
1981												

[1] At pulp mills, paper & board mills, & non-paper mills. [2] Preliminary. *Source: Bureau of the Census*

amounted to about 63.7 million tons, 3 percent above 1979 output of 62.0 million tons, and production in 1981 was forecast at 64.5 million tons. Paper and board consumption in the U.S. is closely related to changes in real (deflated) gross national product (GNP). Assuming limited growth in GNP in 1981, consumption was expected to approach 69.5 million tons, around the same level as calculated for 1980. This projection assumed that the consumption rate would fall below the post-1975 average rate of 50,000 tons for every billion dollars of real GNP. Based on incomplete data, paper and board exports in 1980 were calculated to have reached 4.2 million tons, up 35 percent over 1979, and a new record. Imports were expected to drop by 7 percent in 1981 from the 1980 level to 8.0 million tons, because of the flattened domestic demand and increased U.S. newsprint and coated groundwood printing papers capacity.

Prospects for the U.S. paper and board industry in 1981 were clouded by possible West Coast labor problems, where more than a third of this industry's scheduled labor contract negotiations in 1981 are involved, affecting about 15 percent of total capacity.

Shipments of (Paper Products) Shipping Containers[1] in the United States
In Millions of Square Feet Surface Area

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1970	18,246	14,428	15,516	15,589	15,081	15,108	15,926	15,406	16,527	17,194	13,878	11,964	185,864
1971	14,415	14,223	16,261	16,001	14,916	17,192	15,470	16,412	17,144	17,280	16,653	15,866	191,832
1972	15,453	16,302	18,358	16,579	17,676	18,939	15,427	15,858	21,482	19,721	18,643	17,158	211,926
1973	18,037	17,591	20,428	18,526	20,074	19,702	16,818	19,914	18,720	21,775	19,450	17,016	228,052
1974	19,784	18,480	19,729	19,658	19,842	17,979	17,826	18,807	17,169	18,592	15,576	12,630	216,072
1975	14,689	13,768	14,742	14,541	16,151	15,612	16,023	17,006	18,580	20,053	16,017	16,145	194,329
1976	17,509	16,836	18,976	18,253	18,209	18,526	17,406	18,182	18,633	19,073	18,097	16,672	216,371
1977[2]	16,189	17,656	19,783	18,956	19,377	19,505	17,251	19,694	20,002	19,711	19,285	17,898	227,198
1978[2]	17,880	18,669	21,555	19,970	21,772	22,060	17,601	22,301	20,531	22,608	20,354	18,599	243,898
1979[2]	20,844	19,409	22,863	20,574	21,769	20,986	19,615	22,163	20,327	23,617	20,330	18,109	250,643
1980[2]	21,935	20,452	21,466	20,636	19,150	19,115	18,456	19,345	21,054	23,229	18,849	19,313	242,991

[1] Corrugated & solid fiber. [2] Preliminary. *Source: National Paperboard Association*

Salient Statistics of Newsprint in the United States and Canada
In Thousands of Metric[4] Tons

	United States													Canada		
			Imports—By Countries of Origin									Stocks, Dec. 31				
Year	Production	Exports	Canada	Finland	Italy	Norway	Sweden	U.K.	Others	Total	Consumption	At Mills	At Publishers[2]	Production	Exports	Stocks At Mills
1970	3,310	141	6,320	308	—	—	7	—	—	6,635	9,727	33	749	8,607	7,876	236
1971	3,296	161	6,564	303	—	—	—	—	14	6,881	9,829	41	705	8,455	7,490	332
1972[3]	3,656	122	6,772	328	—	—	—	—	0	7,101	10,547	27	544	8,820	8,120	251
1973	3,738	107	6,855	381	—	—	—	—	0	7,236	10,794	24	603	9,140	8,340	193
1974	3,561	103	6,949	213	—	—	—	—	—	7,162	10,284	23	827	9,548	9,075	143
1975	3,691	123	5,488	33	—	—	—	—	—	5,521	9,254	21	734	7,679	6,863	95
1976	3,736	95	6,251	57	—	—	—	—	—	6,308	9,611	29	921	8,915	7,827	299
1977[4]	3,512	117	5,751	0	—	—	—	—	—	5,751	9,279	31	722	8,154	7,345	282
1978	3,418	75	6,428	0	—	—	—	—	—	6,428	9,864	20	660	8,811	7,974	184
1979	3,685	65	6,372	—	—	—	35	—	97	6,504	10,197	16	628	8,756	7,809	162
1980[1]	4,239	159	7,127	8	9	15	54	37	13	7,263	10,089	22	721	8,625	7,642	165

[1] Preliminary. [2] Reporting only to A.N.P.A.; group represents about 75%. [3] Beginning 1972 data is for 30 lb. basis. [4] Data prior to 1977 are in THOUSANDS OF SHORT TONS. *Source: Newsprint Service Bureau, A.P.I.*

Average Price of Newsprint Rolls[1]
Index—1967 = 100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1970	150.50	150.50	150.50	150.50	150.50	150.50	150.50	150.50	150.50	150.50	150.50	150.50	150.50
1971	109.9	109.9	109.9	113.0	113.0	113.0	113.0	113.0	113.0	113.0	113.0	113.0	112.2
1972	114.2	115.6	117.0	117.0	117.0	117.0	117.0	117.0	117.0	117.0	117.0	117.0	116.7
1973	117.0	119.2	120.4	121.0	121.0	121.0	121.6	121.6	122.1	122.1	128.9	130.8	122.2
1974	132.3	132.3	139.9	147.2	147.2	148.6	148.6	160.8	164.4	164.4	164.4	164.4	151.2
1975	181.8	181.8	181.8	184.7	184.7	184.7	184.7	184.7	184.7	184.7	184.7	184.7	184.0
1976	184.7	184.7	190.1	193.1	197.9	197.9	202.7	203.3	205.3	205.3	205.3	207.6	198.2
1977	209.4	209.4	216.7	216.7	216.7	216.7	216.7	216.7	216.7	216.7	216.7	216.7	215.4
1978	216.7	216.7	216.7	228.2	228.2	228.2	228.2	230.5	230.5	230.5	230.5	230.5	226.3
1979	230.5	238.9	241.7	244.7	247.7	247.7	247.7	247.7	247.7	262.1	265.1	268.2	249.4
1980	269.4	269.4	269.4	269.4	277.6	283.7	283.7	N.A.	283.8	283.8	283.8	298.3	279.3

[1] Data for 1970 are prices for standard rolls, contract, delivered to principal ports.
Source: Bureau of Labor Statistics (0913–0291.02)

PAPER

U.S. Production & Consumption of Wood Pulp, Pulpwood & Other Fibrous Materials in the Manufacture of Paper & Board In Thousands of Short Tons[6]

Year	Wood Pulp Production												Consumption in the Manufacture of Paper and Board		
		Sulfite		Sulfate											
	Special Alpha[2]	Bleached	Unbleached	Bleached	Semi-Bleached	Unbleached	Soda	Groundwood	Semi-Chemical	Defibrated[3]	Screenings, Damaged, etc.	Total Wood Pulp	Wood Pulp[4]	Other Fibrous Materials[5]	Pulpwood[6]
1969	1,676	1,893	391	10,679	1,721	16,209	241	4,416	3,620	1,294	291	42,813	43,700	11,817	65,892
1970	1,705	1,931	413	11,348	1,906	16,217	218	4,404	3,297	—2,105—		43,546	43,192	11,423	67,562
1971	1,674	1,809	354	11,684	1,557	16,309	208	4,462	3,473	—2,372—		43,903	44,148	11,875	67,157
1972	1,656	1,827	345	12,460	1,574	17,792	184	4,639	3,786	—2,502—		46,767	47,347	12,595	71,538
1973	1,637	1,810	374	13,055	1,826	18,165	188	4,670	3,864	—2,740—		48,327	48,772	13,257	73,596
1974	1,723	1,804	405	13,705	1,672	17,635	200	4,711	3,758	—2,736—		48,349	48,341	12,936	74,327
1975	1,583	1,594	357	12,448	1,396	15,369	N.A.	4,351	3,201	—2,785—		43,084	42,431	10,992	65,373
1976	1,443	1,599	435	13,696	1,298	17,784	N.A.	4,649	3,576	—3,242—		47,421	47,541	12,616	72,011
1977	1,401	—2,012—		14,384	1,244	18,436	N.A.	4,852	3,542	—3,226—		49,132	48,477	12,929	73,935
1978	1,415	—1,643—		15,218	1,198	18,693	N.A.	4,807	3,552	—3,233—		49,694	49,614	13,305	74,170
1979[1]	1,499	1,381	398	18,056	N.A.	19,607	N.A.	4,443	4,633	N.A.		50,016	N.A.	13,548	79,663
1980[7]	1,600	—1,850—		20,000		20,000		4,500	4,500			52,000		13,000	81,000

[1] Preliminary. [2] Also includes dissolving grades. [3] Or exploded. [4] Does not include wood pulp consumption by plants classified outside paper & board industries. [5] Waste paper; straw; rags; cotton fibre; manila stock; etc. [6] Data for pulpwood expressed in thousands of cords of 128 cu. ft.—roughwood basis. Pulpwood includes slabs; chips; & millwaste. [7] Estimate.
Sources: Bureau of the Census; American Paper Inst.

U.S. Foreign Trade in Pulpwood, Wood Pulp, Paper, Paper Board & Paper Products In Thousands of Short Tons

Year	Exports							Imports							
	Wood Chips	Wood Pulp	Waste Fibrous Mater.[3]	Paper	Paper Board	Construction P. & B.	Converted Paper & Board	Pulpwood Chips	Wood Pulp	Waste Fibrous Mater.	Paper	Paper Board	Construction P. & B.	Paper & BD. Products	Total Value of Imports Mill. $[4]
1969	1,471	2,103	289	517	2,023	59	137	620	4,040	139	7,121	11	275	29	1,615
1970	2,615	3,095	408	534	2,100	59	145	870	3,518	114	7,018	10	201	29	1,603
1971	1,926	2,175	419	549	2,377	65	156	1,202	3,515	113	7,268	17	293	33	1,638
1972	2,524	2,237	415	569	2,288	79	166	978	3,773	132	7,519	8	461	39	1,791
1973	3,466	2,344	683	601	2,129	98	231	1,254	3,993	133	7,928	33	452	57	2,177
1974	3,866	2,806	1,383	923	2,471	125	348	818	4,123	133	7,874	34	339	62	2,964
1975	3,177	2,565	861	947	1,808	115	301	626	3,078	134	6,118	8	176	39	2,678
1976	3,947	2,518	1,273	928	2,134	128	333	1,051	3,727	163	6,962	13	264	65	3,295
1977	4,038	2,640	1,544	724	2,210	109	342	1,386	3,864	148	7,065	28	346	201	3,568
1978	3,618	2,599	1,599	552	2,299	82	520	1,791	4,025	127	8,347	100	503	327	3,992
1979[1]	4,499	2,935	2,233	590	2,491	80	606	1,528	4,318	123	8,368	82	470	321	4,759
1980[2]	4,600	3,600	2,800	760	3,100	83	675	1,800	4,300	130	8,500	90	380	270	5,400

[1] Preliminary. [2] Estimates. [3] Excludes rags for paperstock. [4] Paper base stocks, paper and manufactures.
Source: Dept. of Commerce

Paper and Board Production in the United States In Thousands of Short Tons

Year	Paper							Paperboard					Construction[3]		
	Newsprint	Coated Printing	Book	Writing & Relat.	Coarse[2]	Sanitary Tissue	All Paper Total	Other Bleached Paperboard	Corrugating Material	Liner Board	All Paperboard Total	Wet Machine Board	Construction (Paper)	All Construction Total	Total All Types
1969	3,253	3,349	2,654	2,989	5,521	3,341	23,595	1,815	4,485	11,559	26,069	145	1,603	4,376	54,187
1970	3,345	3,279	2,646	2,937	5,439	3,548	23,625	1,856	4,332	11,436	25,477	139	1,594	4,276	53,516
1971	3,321	3,251	2,758	2,996	5,442	3,660	23,811	1,938	4,596	11,700	26,135	138	1,837	5,001	55,086
1972	3,451	3,546	3,010	3,329	5,713	3,796	25,435	1,964	4,992	13,030	28,522	148	1,915	5,352	59,457
1973	3,459	3,814	3,116	3,817	5,694	3,726	26,483	1,971	5,285	13,139	29,267	149	1,858	5,406	61,304
1974	3,395	3,974	2,832	4,102	5,731	3,800	26,674	1,957	5,093	12,755	28,017	144	1,845	5,118	59,930
1975	3,476	3,318	2,400	3,244	4,805	3,669	23,306	1,792	4,411	11,170	24,452	115	1,616	4,648	52,521
1976	3,400	3,967	2,984	3,910	5,661	3,936	26,612	1,894	5,045	12,501	27,840	130	1,771	5,316	59,898
1977	3,525	4,215	3,316	4,170	5,930	4,045	28,096	1,968	5,485	105,902	29,006	N.A.	1,852	5,492	62,722
1978	3,489	4,513	3,507	4,277	5,778	4,036	28,506	1,634	5,792	N.A.	30,033	N.A.	1,915	5,625	64,300
1979[1]	3,797	4,674	N.A.	4,264	5,714	4,139	29,296	1,770	5,442	N.A.	30,079	144	1,900	5,445	64,964
1980[4]	4,500	4,700		4,600	5,750	4,150	30,400	1,800	5,500		30,200	130	1,750	4,100	66,000

[1] Preliminary. [2] Packaging & industrial converting paper. [3] Paper and board. [4] Estimate. *Source: Bureau of the Census*

Average Price of Wood Pulp, Unbleached Sulphate[1] In Dollars Per Ton

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1971	150.13	150.13	150.13	150.13	150.13	150.13	150.13	150.13	150.13	150.13	150.13	150.13	150.13
1972	150.13	150.13	150.13	150.13	150.13	150.13	150.13	150.13	150.13	150.13	150.13	150.13	150.13
1973	150.13	150.13	150.13	170.00	N.A.	N.A.	188.00	181.25	181.25	206.50	206.50	206.50	179.04
1974	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
1975[2]	364.13	364.13	364.13	364.13	364.13	358.11	364.13	364.13	364.13	364.13	364.13	366.50	363.83
1976	366.50	366.50	366.50	366.50	366.50	366.50	367.13	365.06	365.06	365.06	365.06	365.06	365.95
1977	360.93	364.64	364.64	364.64	368.54	368.54	368.54	368.54	357.57	354.75	N.A.	N.A.	364.13
1978	350.76	341.15	341.15	330.52	327.66	327.66	306.73	306.73	306.73	339.91	336.97	336.97	329.41
1979	345.85	346.91	358.68	363.48	363.48	373.36	377.45	383.87	383.87	413.59	413.59	413.59	377.89
1980	440.95	440.95	440.95	473.35	473.35	473.35	476.97	476.97	476.97	476.97	476.97	476.97	467.05
1981	476.97	476.97											

[1] Data are for domestic, unbleached, southern, f.o.b. shipping points. [2] Bleached sulphate softwood, beginning Jan. 1975.
Source: Bureau of Labor Statistics (0911–0211.06)

Average Price of Uncoated Book Paper[1] (A-Grade) In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1972	18.74	18.74	18.74	18.62	18.62	18.62	18.68	18.68	18.68	18.80	18.80	18.80	18.71
1973	18.80	18.80	19.05	19.17	19.17	19.29	19.29	19.29	19.29	19.78	19.78	19.78	19.29
1974	20.03	20.03	21.19	23.03	23.03	23.28	25.11	25.81	25.92	27.08	27.08	27.08	24.06
1975[2]	28.54	28.62	28.70	28.64	28.54	28.52	28.56	28.54	28.57	28.52	28.80	29.20	28.40
1976	29.88	29.88	24.81	25.18	25.48	25.48	31.18	31.21	31.20	31.85	32.32	32.15	29.22
1977	32.23	32.50	32.46	33.20	33.43	33.38	33.92	33.83	33.94	34.99	35.03	35.08	33.67
1978	34.98	35.02	35.90	36.32	36.49	36.80	36.82	37.08	37.42	38.21	39.26	39.34	36.97
1979	39.45	39.80	39.94	40.33	40.61	40.76	40.77	40.64	41.00	41.92	41.96	41.94	40.76
1980	41.72	42.74	43.20	43.71	43.71	43.71	43.73	43.87	43.92	45.48	46.07	46.34	44.01
1981	46.28	46.94											

[1] Book paper, A-Grade, English finish, white sheets untrimmed, cased, carload lots, f.o.b. mills. [2] Coated paper No. 3.
Source: Bureau of Labor Statistics (0913–0113.07)

Average Price of Manila Wrapping Paper[1] Index 1967 = 100[2]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1972	11.67	11.67	11.67	11.86	11.86	12.01	12.01	12.01	12.01	12.01	12.38	12.38	11.96
1973	13.81	13.81	13.81	13.95	13.95	14.90	14.51	14.51	14.31	14.31	14.31	14.31	14.21
1974	14.46	14.46	14.46	15.68	15.68	15.68	15.99	N.A.	N.A.	N.A.	N.A.	N.A.	15.20
1975	21.71	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	21.71
1976[2]	205.9	209.7	209.7	209.6	209.7	208.0	208.0	208.0	208.0	208.0	208.0	208.0	208.4
1977	208.0	208.0	208.0	211.3	214.6	214.6	214.6	214.6	214.6	216.2	217.8	217.8	213.3
1978	217.8	217.8	217.8	217.8	217.8	222.0	228.2	228.2	228.2	234.3	238.5	238.5	225.6
1979	238.5	238.5	238.5	238.5	241.9	246.1	246.1	246.1	241.9	241.9	248.9	248.9	243.0
1980	248.9	254.9	254.9	258.4	268.0	278.2	270.1	270.1	270.0	270.0	N.A.	N.A.	264.3
1981	N.A.	N.A.											

[1] Unbleached kraft wrapping paper, basis weight 30 lb. rolls, F.O.B. mills. Prior to Jan. 1973 prices are for SOUTHERN STANDARD (KRAFT). [2] Data prior to 1976 are in CENTS PER POUND. *Source: Bureau of Labor Statistics* (0913–0151.06)

Average Price of Boxboard[1] In Dollars Per Ton

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1972	149.12	155.31	155.31	155.31	155.31	155.31	155.31	155.31	155.31	155.31	155.31	155.31	154.79
1973	155.31	157.16	157.16	162.11	163.35	164.59	164.59	164.59	164.59	170.16	173.87	173.87	187.28
1974	202.95	202.95	217.80	224.40	231.00	231.00	231.00	234.30	234.30	234.30	234.30	232.65	225.91
1975[2]	205.27	205.27	205.27	203.62	203.63	203.63	203.63	203.63	203.63	203.63	203.63	203.63	204.04
1976	203.63	203.63	203.63	203.63	203.63	210.27	211.92	211.92	211.92	211.92	211.92	211.92	208.34
1977	211.92	211.92	211.92	211.92	211.92	216.87	216.87	216.87	216.87	216.87	218.53	218.53	215.08
1978	218.53	220.18	221.83	221.83	221.83	221.83	221.83	221.83	221.83	223.48	223.48	225.13	221.97
1979	225.13	228.43	N.A.	N.A.	311.03	311.03	320.60	322.25	322.25	328.85	328.85	335.78	303.42
1960	335.78	335.78	348.98	360.53	360.53	363.83	377.02	377.02	N.A.	390.63	390.63	393.10	366.71
1981	395.58	399.29											

[1] Manila lined chip boxboard, No. 90 or heavier, eastern territory. [2] Beginning 1975 prices are for BENDING CHIPBOARD (Folding Boxboard). *Source: Bureau of Labor Statistics* (0914–0225.03)

Peanuts and Peanut Oil

World production of peanuts (in shells) in 1980/81 was estimated by the USDA Foreign Agricultural Service (FAS) at 17.3 million tonnes, about 2.3 percent below the 17.7 million produced in 1979/80 and the 1974/75–1978/79 average of 17.7 million. World peanut oil production in 1979/80 (calculated on the basis of the portion of the crop expected to be available for crushing or export—not on actual production) was estimated by the USDA at close to 0.098 million tonnes vs. about 0.170 million in 1979/80. India continued in 1980/81 as the world's major producer of peanuts, with in-shell production forecast at 6.0 million tonnes. China's production, second largest, was forecast at 3.2 million tonnes.

The 1980/81 U.S. peanut crop, the world's third largest, was forecast by the FAS at 1.0 million tonnes, 42 percent below the previous year's level, and the smallest U.S. peanut crop since 1964. The decreased production was primarily a result of the summer 1980 drought whose high temperatures and insufficient moisture reduced yields to 1,633 pounds per acre, compared with 2,611 pounds per acre in 1979, according to the USDA. The area harvested in 1980 was around 9 percent below the previous year's level. 1980/81 U.S. exports were expected to total 196,000 metric tonnes, 46 percent below the previous season.

All major peanut use categories in the U.S. were expected to be lower in 1980/81 than in the previous season. The domestic crush was projected at 30% below year-earlier levels. Total U.S. peanut supplies (stocks plus production) for 1980/81 were projected at 3.0 billion pounds, or one-third below 1979/80. To alleviate the shortage that existed, despite declines in use, the import quota was raised by 200 million pounds (in-shell) over the previous quota of 1.7 million. Domestic edible use of peanuts was forecast at 1.6 billion pounds, one-fifth below the previous season's level. Shortages were felt by manufacturers of peanut butter and other peanut products. Consequent retail price increases of fifty percent or more for peanut products were reported.

Government Activities

The 1981 national acreage allotment was increased by 125,000 acres to 1,739,000 acres while the poundage quota was decreased by the maximum 5 percent to 1,440,000 short tons. The increase in the acreage allotment was needed to provide an adequate supply for the domestic and export markets. The increase in the allotment was reflected in planting intentions, with expected peanut acreage up 4 percent. On balance, the carryover of 1980-crop undermarketings was expected to increase the effective poundage quota in 1981 about 5 percent above 1980. It was also expected to help individual farmers have enough acreage to produce their poundage eligible for quota loan. Under the peanut price support program, farms are assigned an acreage allotment and a poundage quota, and only peanuts grown on alloted acreage are eligible for price support.

There are two levels of price support for peanuts, one for "quota" peanuts and another, lower level, for "additional" peanuts. Peanuts grown on alloted acres and within the farm's poundage quota are "quota" peanuts. Those grown on alloted acres, but in excess of the farm's quota, are "additional" peanuts.

Loan rates for the 1981 crop quota and additional peanuts were, early in 1981, determined to be unchanged from the previous year's level. In 1980, quota peanuts were supported at $455 per ton and additional peanuts at $250 per ton. (No deduction from the loan advance is provided for storage, handling, and inspection costs.)

Price support is carried out primarily through nonrecourse warehouse-storage loans to approved grower associations acting for farmers. Also, the price may be supported through loans to producers on farm-stored peanuts and purchases from producers.

Marketing quotas are in effect for 1981-crop peanuts. Marketing quota penalties apply to peanuts grown in excess of the farm's poundage quota.

Domestic Sales Prices

Approximately 83 percent of the U.S. peanut crop is marketed domestically, with the remaining 17 percent placed under CCC loan. Sales of quota and additional peanuts for domestic edible use, including use for seed, will be made by the CCC at not less than 105 percent of the quota loan rate, plus costs, if sold on or before December 31 or 107 percent of the quota loan value plus costs if sold after that date. Farmers' stock peanuts will be sold by the CCC for export use at no less than the quota support price, plus costs and no less than $20 per ton below the quota support price for additional peanuts.

Export Sales Policies

On export sales of 1981 crop peanuts sold for crushing only, the CCC sales price will be at no less than the quota support price, plus costs on quota peanuts, and no less than $250 per ton plus costs for additional peanuts.

Government Plans

The Reagan administration announced in March 1981 that it wanted to eliminate acreage allotments for peanut production. Yearly reductions in poundage quotas were planned.

Crude Peanut Oil Produced[2] in the United States In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1975	17.7	12.8	12.1	13.3	17.2	22.8	29.2	29.1	33.6	34.6	27.6	25.3	275.3
1976	26.6	32.6	44.3	51.1	56.9	66.5	47.6	41.5	39.0	31.5	24.6	24.5	486.6
1977	20.7	24.7	35.5	33.0	32.8	30.1	24.7	22.4	6.9	6.1	10.5	4.4	252.0
1978	9.7	9.2	11.1	18.0	18.1	18.1	10.4	16.6	7.7	10.3	6.2	9.5	145.2
1979[1]	11.7	14.2	22.5	18.6	23.0	15.5	8.2	10.8	4.5	4.5	6.1	7.7	183.0
1980[1]	6.2	15.1	16.6	25.9	30.7	22.9	23.5	4.3	5.9	2.1	6.3	5.9	165.4
1981[1]	6.1	6.0											

[1] Preliminary [2] Not seasonally adjusted. *Source: Statistical Reporting Service, U.S.D.A.*

World Production of Peanuts (in the Shell) In Thousands of Metric Tons

Crop Year	Argentina	Zaire (Congo)	Brazil	Burma	China[2]	Senegal	India	Indonesia	Thailand	Sudan	Nigeria	Taiwan	United States	South Africa	World Total
1968–9	283	161	754	398	2,150	830	4,631	410	158	—	1,445	106	1,155	224	15,525
1969–0	217	200	754	444	2,350	800	5,130	382	180	—	1,360	101	1,150	343	16,513
1970–1	234	180	928	529	2,650	545	6,111	402	185	—	780	122	1,351	303	17,431
1971–2	388	180	849	486	2,580	920	6,181	400	200	—	845	98	1,363	385	18,121
1972–3	252	180	893	390	2,400	610	4,092	389	203	—	1,125	94	1,485	400	15,690
1973–4	440	200	590	234	2,600	485	5,932	434	210	—	100	97	1,576	197	16,216
1974–5	290	230	439	466	2,700	980	5,111	439	230	—	530	94	1,664	533	17,384
1975–6	375	268	335	450	2,700	1,424	6,755	542	260	—	332	91	1,750	256	18,912
1976–7	600	289	324	450	2,750	1,182	5,264	682	152	740	350	89	1,701	240	17,264
1977–8	372	295	340	464	2,065	671	6,087	743	106	1,021	390	77	1,690	305	17,112
1978–9	672	295	465	390	2,377	1,053	6,208	697	101	829	450	92	1,793	190	18,145
1979–0[1]	286	295	500	422	2,822	600	5,772	715	123	850	540	88	1,800	330	17,670
1980–1[3]	422	295	360	420	3,200	500	6,000	700	140	800	570	85	1,042	300	17,362
1981–2															

[1] Preliminary. [2] Includes Manchuria. [3] Estimated. *Source: Foreign Agricultural Service, U.S.D.A.*

Salient Statistics of Peanuts in the United States

Crop Year	Acreage Planted (1,000 Acres)	Acreage Harvested For Nuts (1,000 Acres)	Average Yield Per Acre In Lbs.	Production Picked and Threshed 1,000 Lbs.	Season Farm Price ¢ Lb.	Farm Value Million Dollars	Thousand Pounds (Yr. Beg. Aug.) Exports Unshelled	Exports Shelled	Imports Unshelled	Imports Shelled
1968–9	1,496	1,438	1,770	2,546,591	11.9	303,726	992	79,623	871	769
1969–0	1,512	1,456	1,742	2,535,394	12.3	312,358	1,530	100,051	20-	335
1970–1	1,518	1,469	2,030	2,983,121	12.8	382,503	6,436	213,027	1,269	204
1971–2	1,529	1,455	2,066	3,005,118	13.6	408,371	35,801	403,397	1,299	859
1972–3	1,533	1,486	2,203	3,274,761	14.5	475,367	4,369	385,588	1,039	443
1973–4	1,530	1,496	2,323	3,473,837	16.2	562,460	66,094	523,986	79	444
1974–5	1,520	1,472	2,491	3,667,604	17.9	657,574	17,703	548,083	127	466
1975–6	1,532	1,500	2,564	3,846,722	19.6	756,530	22,708	318,229	207	290
1976–7	1,549	1,518	2,464	3,739,190	20.0	750,260	24,765	580,496	432	66
1977–8	1,545	1,512	2,456	3,715,055	21.0	783,302	64,284	705,032	272	148
1978–9[1]	1,541	1,509	2,619	3,952,384	21.1	841,568	94,612	745,593	53	161
1979–0[1]	1,546	1,520	2,611	3,968,485	20.7	821,476				
1980–1[2]	1,542	1,406	1,633	2,296,250	23.7	544,152				
1981–2[2]	1,609									

[1] Preliminary. [2] Estimate. *Source: Economic Research Service, U.S.D.A.*

Supply & Disposition (Farmers' Stock Basis) & Support Program

Crop Year Begin. Aug. 1	Supply: Production[3]	Supply: Imports	Supply: Stocks Aug. 1	Total	Disposition: Exports & Shipments	Crushed for Oil	Seed, Feed & Residual	Domestic Food Use: Military	Civilian	Civilian per Capita (Lbs.)	Government Support Program: Support Price ¢ Lb.	% of Parity	Amount Put under Support: Quantity Mil. Lbs.	% of Prod.	Owned by CCC July 31 Mi. Lbs.
	Million Pounds														
1968–9	2,547	2	353	2,902	105	654	243	3	1,536	7.7	12.012	78	699	27.4	—
1969–0	2,535	1	357	2,893	140	581	237	3	1,574	7.8	12.375	76	622	24.5	—
1970–1	2,938	2	353	3,334	290	799	209	3	1,580	7.8	12.75	75	1,084	36.3	11
1971–2	3,005	2	453	3,460	552	814	79	—	1,623	7.9	13.42	75	1,238	41.2	4
1972–3	3,275	2	392	3,669	521	850	175	—	1,694	8.2	14.25	75	1,277	39.0	24
1973–4	3,474	1	429	3,904	709	683	119	—	1,840	8.8	16.42	75	1,029	29.6	0
1974–5	3,668	1	553	4,222	740	590	−54	—	1,800	8.5	18.30	75	1,072	29.2	552
1975–6	3,847	1	1,146	4,993	434	1,447	193	—	1,859	8.7	19.70	75	1,136	29.5	958
1976–7	3,739	1	1,060	4,800	783	1,108	513	—	1,789	8.4	20.70	75	854	22.8	0
1977–8	3,715	1	608	4,324	1,025	487	392	—	1,838	8.5	21.50	75	535	14.4	2
1978–9	3,952	1	581	4,534	1,141	527	315	—	1,959	9.2	21.00	67	515	12.9	—
1979–0[1]	3,968	1	586	4,555	1,000	571	293	—	1,998	9.3	21.00	59	702	17.7	—
1980–1[2]	2,296	2	628	3,034	575	340	296	—	1,600	9.0	22.75				
1981–2															

[1] Preliminary. [2] Estimate. [3] Production is on a net weight basis. *Source: Economic Research Service, U.S.D.A.*

PEANUTS AND PEANUT OIL

U.S. Production of Peanuts—Harvested for Nuts, by States In Millions of Pounds

Crop Year	Alabama	Arkansas	Florida	Georgia	Louisiana	Mississippi	New Mexico	No. Car.	Oklahoma	So. Car.	Tennessee	Texas	Virginia	U.S. Total
1968	246.2	—	85.7	934.4	—	1.8	17.7	346.5	227.5	24.0	—	426.8	236.6	2,547
1969	285.2	—	85.1	946.3	—	3.2	17.5	343.2	204.0	24.8	—	389.1	237.2	2,535
1970	315.4	—	110.0	1,125.5	—	4.4	18.3	445.9	192.0	29.6	—	429.9	312.1	2,983
1971	401.6	—	139.9	1,269.9	—	16.5	16.6	325.5	219.0	30.0	—	366.8	219.5	3,005
1972	368.4	—	137.7	1,341.4	—	16.0	20.5	370.2	242.7	31.8	—	480.5	265.7	3,275
1973	400.0	—	150.4	1,344.0	—	16.6	18.9	466.5	253.7	30.1	—	471.2	322.4	3,474
1974	474.4	—	170.5	1,661.5	—	6.0	13.0	384.3	217.7	31.0	—	413.3	295.9	3,668
1975	535.6	—	177.7	1,726.6	—	13.5	20.2	373.7	232.3	29.5	—	463.6	284.6	3,847
1976	513.6	—	165.0	1,554.3	—	12.3	21.7	440.7	246.0	24.6	—	463.6	309.0	3,739
1977	589.1	—	170.5	1,499.1	—	11.6	25.4	444.1	267.6	31.2	—	394.5	293.0	3,715
1978	551.8	—	182.1	1,725.3	—	13.1	24.1	465.4	207.0	35.7	—	436.5	311.6	3,952
1979	584.9	—	179.9	1,704.8	—	12.4	25.3	378.5	264.0	32.3	—	533.0	253.5	3,968
1980[1]	260.0	—	140.3	995.0	—	8.5	20.1	288.8	141.8	13.2	—	300.0	128.8	2,296
1981														

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[1] Preliminary, December estimate. *Source: Crop Reporting Board, U.S.D.A.*

Visible Supply (Stocks) of Peanuts and Products on Hand in the U.S. In Millions of Pounds

Year Begin. Aug. 1	Farmers' Stock Peanuts[2]				Shelled Edibles				Shelled Oil Stock[3]	Total Shelled	Roasting Stock[5]	Crude Peanut Oil[4]	Peanut Cake & Meal[4]
	Virginias	Runners	Spanish	Total	Virginias	Runners	Spanish	Total					
1969–0	.7	.6	3.6	9.1	103.4	67.0	56.4	226.8	23.4	250.2	14.9	9.5	8.9
1970–1	2.4	0	.5	2.8	105.8	65.4	67.1	238.3	12.7	251.0	16.1	8.8	7.7
1971–2	3.2	4.0	7.0	14.2	126.9	81.1	83.0	291.0	27.1	318.0	16.0	11.8	21.6
1972–3	3.4	8.2	15.7	27.4	66.9	90.7	67.0	224.5	33.8	258.3	20.9	8.5	3.0
1973–4	2.9	48.7	5.2	56.9	45.2	122.0	73.5	240.6	25.6	266.3	17.7	11.7	7.0
1974–5	3.8	30.4	4.2	38.4	87.3	209.5	62.9	359.8	16.2	375.9	15.1	10.9	6.8
1975–6	16.4	193.8	16.8	227.0	89.3	129.9	60.2	279.4	20.7	300.1	17.8	18.3	10.4
1976–7	4.0	244.0	1.9	250.0	68.5	159.9	87.2	315.7	83.2	398.8	30.6	22.9	5.9
1977–8	2.0	49.4	3.0	54.4	62.1	255.0	55.4	372.5	29.8	402.3	18.2	42.6	11.7
1978–9	8.0	20.0	.6	28.7	62.5	251.6	44.8	359.0	37.4	396.4	25.6	14.5	10.9
1979–0	7.2	5.9	.3	13.5	87.7	214.2	46.1	348.0	46.4	394.4	48.2	17.2	1.0
1980–1[1]	8.4	44.0	11.0	63.4	67.9	265.4	38.4	401.1	29.5	401.1	30.6	21.6	8.8
1981–2													

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[1] Preliminary. [2] Excludes stocks on farms, but includes stocks owned or held for account of C. C. C. [3] Includes ungraded or straight run peanuts. [4] Relates to peanut oil mills only. [5] Cleaned & unshelled. *Source: Agricultural Marketing Service, U.S.D.A.*

Average Price Received by Producers in U.S. for Peanuts in the Shell In Cents Per Pound

Year	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Average[1]
1968–9	11.6	12.1	11.9	12.0	11.8	11.9	11.8	—	—	—	—	12.0	11.9
1969–0	12.1	12.4	12.3	12.5	12.1	12.1	12.1	—	—	—	—	12.2	12.2
1970–1	12.9	13.2	12.3	11.9	13.0	12.0	—	—	—	—	—	12.9	12.6
1971–2	13.5	13.8	13.6	13.9	—	—	—	—	—	—	—	13.0	13.6
1972–3	14.8	14.3	14.3	14.3	14.2	—	—	—	—	—	—	15.0	14.5
1973–4	16.1	16.4	16.1	16.5	16.6	—	—	—	—	—	—	17.7	16.2
1974–5	17.9	18.1	17.6	17.8	17.6	—	—	—	—	—	—	18.4	17.9
1975–6	19.7	19.8	19.6	18.7	—	—	—	—	—	—	—	19.1	19.6
1976–7	19.8	19.9	20.0	20.0	20.2	—	—	—	—	—	—	21.3	20.0
1977–8	20.9	20.9	20.4	20.4	21.5	—	—	—	—	—	—	21.2	21.0
1978–9	20.8	21.4	21.0	20.8	21.2	—	—	—	—	—	—	21.1	21.1
1979–0	21.4	20.3	20.3	20.6	20.4	—	—	—	—	—	—	21.0	20.7
1980–1[2]	20.7	22.0	27.1	37.1	49.2	—	—	—					
1981–2													

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[1] Weighted average by sales. [2] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

Millings and Production of Peanuts and Products in the U.S. In Millions of Pounds

Year Begin. Aug. 1	Millings				Production									
	Farmers' Stock Peanuts[2]				Shelled Edibles									
	Virginias	Runners	Spanish	Total	Virginias	Runners	Spanish	Total	Shelled Oil Stock	Total All Grades	Cleaned (In Shell)	Shelled Peanuts Crushed	Crude Peanut Oil	Peanut Cake & Meal
1968–9	700.1	583.5	991.4	2,275	342.4	333.7	575.9	1,252	352.1	1,604	103.4	491.4	205.2	275.2
1963–0	768.0	496.6	1,003	2,268	393.8	307.2	583.9	1,285	315.7	1,601	107.0	437.1	182.0	243.8
1970–1	880.4	692.9	1,043	2,616	442.0	371.1	560.0	1,373	482.3	1,855	119.1	600.9	253.5	340.4
1971–2	675.1	1,066	909.5	2,650	303.0	565.3	517.3	1,386	518.7	1,904	121.0	612.3	260.0	334.4
1972–3	689.1	1,288	911.4	2,888	284.9	666.7	551.6	1,503	567.1	2,070	113.3	638.8	269.0	359.8
1973–4	784.2	1,398	869.1	3,051	378.2	778.4	522.0	1,679	509.3	2,188	149.5	513.6	213.9	285.0
1974–5	636.1	1,646	641.3	2,923	283.3	892.2	381.6	1,557	558.4	2,116	132.2	443.7	188.4	245.6
1975–6	663.6	2,213	584.6	3,462	283.5	966.5	340.9	1,591	914.7	2,506	154.8	1,088	476.0	601.2
1976–7	669.7	2,356	429.9	3,455	271.6	1,212	273.8	1,757	729.8	2,487	150.8	833.2	362.6	466.5
1977–8	734.0	2,246	368.7	3,349	284.2	1,383	214.8	1,882	468.8	2,350	198.1	366.2	151.0	208.1
1978–9	805.5	2,272	346.4	3,424	320.4	1,413	210.5	1,944	436.0	2,380	233.5	396.0	164.3	218.0
1979–0[1]	682.9	2,496	323.7	3,502	254.2	1,573	176.1	2,003	487.0	2,490	183.8	429.1	179.7	236.2
1980–1														

[1] Preliminary. [2] For prod. of shelled edible grades, oil stock (including ungraded or straight run peanuts) and roasting stock. *Source: Agricultural Marketing Service, U.S.D.A.*

Disappearance and Reported Uses of Peanuts and Products in the U.S. In Millions of Pounds

Year Begin. Aug. 1	Apparent Disappear.[2] (Milled Peanut Prod.)						Reported Used (Shelled Peanuts—Raw Basis)							
	Shelled Peanuts						Edible Grades Used in							
							Peanut							
	Edible Grades	Oil Stock[3]	Total All Grades	Cleaned (In Shell)	Crude Peanut Oil[4]	Cake & Meal[4]	Candy	Salted	Butter Sandwiches	Butter[5]	Other Products	Total	Oil Stock Crushed For Oil, Cake & Meal	Total All Grades
1968–9	1,245	357.2	1,602	103.9	202.7	275.5	226.4	240.0	22.1	524.8	18.5	1,032	491.4	1,523
1969–0	1,273	326.4	1,600	105.8	182.7	245.0	236.4	240.9	21.7	540.5	21.1	1,061	437.1	1,498
1970–1	1,320	467.9	1,788	119.2	250.5	326.5	243.2	238.8	25.3	540.4	17.6	1,065	600.9	1,666
1971–2	1,452	512.0	1,964	116.1	263.3	353.0	246.0	241.7	25.6	556.8	17.0	1,087	612.3	1,699
1972–3	1,487	575.3	2,062	116.6	265.7	355.8	259.8	254.4	25.6	578.1	17.6	1,136	638.8	1,774
1973–4	1,559	518.8	2,078	152.1	214.7	285.1	251.5	284.3	23.9	660.0	19.3	1,239	513.6	1,753
1974–5	1,637	551.0	2,188	129.4	181.0	242.0	217.0	278.3	20.4	651.0	14.4	1,181	443.7	1,625
1975–6	1,555	852.2	2,407	142.0	471.3	605.8	239.7	301.6	21.0	648.1	16.0	1,226	1,088	2,314
1976–7	1,700	783.2	2,483	163.2	342.9	460.7	235.0	253.8	24.2	617.9	17.8	1,149	833.2	1,982
1977–8	1,895	461.2	2,356	190.6	179.1	208.9	235.2	274.2	28.2	623.8	18.7	1,180	366.2	1,546
1978–9	19.55	426.9	2,382	210.9	161.6	227.9	268.4	291.6	28.1	664.9	19.1	1,272	396.0	1,668
1979–0[1]	1,979	503.9	2,483	201.4	175.3	228.4	258.4	284.9	30.3	700.0	19.3	1,293	429.1	1,722
1980–1														

[1] Preliminary. [2] Includes in transit, exports and domestic use, except for oil stock for which disappearance is assumed to equal crushings. [3] Graded & ungraded oil stock only. [4] Relates to peanut oil mills only. [5] Peanuts used in peanut butter by mfrs. for own use in candy is included under peanut candy. *Source: Statistical Reporting Service, U.S.D.A.*

World Imports of Peanut Oil (Crude & Refined) into Specified Countries In Thousands of Metric Tons

Year	Algeria	Australia	Austria	Belgium-Lux.	Venezuela	Canada	Dominican Rep.	France	West Germany	Hong Kong	Italy	Singapore	Netherlands	Spain	Portugal	United Kingdom
1968	1.0	5.9	6.7	14.1	—	12.6	—	159.7	55.2	14.2		5.2	9.9	8.4	8.2	126.7
1969	.5	4.6	6.3	17.1	—	8.4	.5	134.9	57.0	14.0		5.0	8.6	5.6	5.1	85.2
1970	.9	6.9	4.0	21.4	—	8.8	5.5	142.6	52.3	12.3		6.1	9.4	3.3	6.7	95.8
1971	0	4.7	4.4	28.5	4	5.3	17	124.0	54.7	15.0		4.8	11.1	1.8	3.6	67.8
1972	13	4.3	4.3	32.9	2	7.4	17	205.9	71.5	15.5		3.6	9.2	6.3	8.3	60.8
1973	30	2.4	4.7	32.0	15	7.4	14.1	167.3	66.3	16.2		4.0	20.0	2.9	5.5	74.8
1974	1	4	3	23	5	6	4	142	51	12		6	15	2	2	37
1975	0	3	3	21	32	7	4	179	38	16		1	9	13	6	29
1976	6	2	2	31	38	7	16	218	37	20	22	3	8	—	—	20
1977	5	4	2	29	64	7	15	217	37	23	31	2	8	—	—	16
1978	—	1	2	25	66	6	2	186	38	22	30	2	11	—	—	15
1979[1]	—	2	2	35	23	5	—	221	40	25	46	2	21	3	—	15
1980																

[1] **Preliminary.** *Source: Foreign Agricultural Service, U.S.D.A.*

PEANUTS AND PEANUT OIL

Production, Consumption, Stocks and Foreign Trade of Peanut Oil in the U.S. In Millions of Pounds

Year	Production		Consumption		Stocks—Dec. 31		Imports for Consumption	Exports	
	Crude	Refined	In Refining	In End pdt's.	Crude	Refined		Crude	Refined
1968	208.8	196.6	204.8	205.5	11.8	6.3	—	2.4	.7
1969	188.2	148.6	153.7	157.4	8.0	6.3	—	31.6	1.9
1970	196.5	157.6	163.3	168.0	8.7	6.6	—	24.7	7.3
1971	280.6	183.3	189.8	189.2	7.8	8.4	—	84.2	.8
1972	257.8	170.9	177.4	178.1	15.9	5.2	—	60.0	.7
1973	265.9	156.0	162.3	160.5	18.9	6.2	—	100.1	3.3
1974	185.0	128.9	134.9	130.4	16.5	7.2	1.1	45.1	.7
1975	275.3	144.9	150.8	122.7	42.6	23.1	.7	17.6	9.2
1976	486.6	259.9	267.8	249.7	192.3	17.4	1.2	9.7	95.7
1977	252.0	249.7	257.2	243.9	91.5	7.6	—	71.8	9.7
1978	145.2	171.9	178.0	169.0	7.3	4.7	—	71.7	17.2
1979[1]	183.0	130.1	134.3	120.4	22.6	7.3			
1980[1]	165.4	170.6	166.7	165.3	7.5	4.3			
1981									

[1] Preliminary. *Source: Bureau of Census*

Utilization of Peanut Oil in the United States In Thousands of Pounds

Year Begin. Aug.	Shortening	Margarine	Cooking and Salad Oils	Other Edible	Total Food Uses	Non-Food Uses	Factory Consumption	Foots & Loss	Domestic Disappearance
1968–9	19,000	4,000	141,000	6,000	169,000	12,000	188,000	7,000	180,000
1969–0	16,000	1,000	129,000	—	145,000	9,000	164,000	5,000	154,000
1970–1	16,000	—	152,000	13,000	181,000	12,000	188,000	7,000	193,000
1971–2	15,000	—	160,000	8,000	183,000	12,000	196,000	7,000	195,000
1972–3	14,000	—	122,000	11,000	147,000	11,000	156,000	6,000	159,000
1973–4	23,000	—	124,000	1,000	147,000	11,000	167,000	6,000	158,000
1974–5	13,000	—	87,000	44,000	145,000	8,000	116,000	5,000	153,000
1975–6	27,000	28,000	150,000	59,000	264,000	12,000	232,000	9,000	276,000
1976–7	29,000	27,000	143,000	26,000	225,000	8,000	218,000	6,000	232,000
1977–8[1]	20,000	—	211,000	−47,000	183,000	11,000		8,000	194,000
1978–9[2]	16,000		146,000						120,000
1979–0[2]			98,000						193,000
1980–1[2]									150,000

[1] Preliminary. [2] Estimate. *Source: Bureau of the Census*

Average Price of Domestic Refined Peanut Oil (in Tanks) in New York In Cents Per Pound

Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Average
1968–9	15.0	14.8	16.0	15.9	16.8	16.0	16.0	16.2	16.4	16.2	16.2	16.9	16.0
1969–0	17.2	17.8	17.2	17.8	18.5	18.0	18.5	18.9	18.5	18.5	18.9	19.2	18.3
1970–1	19.8	19.8	20.2	21.1	21.1	20.4	19.8	20.2	20.4	21.4	21.8	20.6	20.6
1971–2	19.8	19.9	20.4	19.3	19.0	20.1	21.6	21.3	20.6	20.9	19.9	19.3	20.2
1972–3	19.4	20.8	22.3	22.1	21.7	20.9	21.7	23.0	23.7	23.6	34.1	26.4	23.3
1973–4	28.0	28.6	37.1	42.4	48.0	49.8	48.5	49.8	50.9	49.9	50.9	49.8	44.5
1974–5	52.6	50.9	49.8	46.6	45.9	40.5	39.3	36.6	40.9	47.3	52.7	49.3	46.6
1975–6	42.2	39.3	35.3	35.4	37.8	38.9	35.4	31.0	33.5	38.3	36.4	38.0	37.1
1976–7	38.0	37.3	38.9	40.3	41.0	40.8	43.6	35.5	34.7	29.8	29.2	30.7	36.6
1977–8	34.1	33.4	42.8	47.3	44.9	41.2	46.6	48.1	47.1	44.5	44.9	48.6	43.6
1978–9	51.6	56.0	52.9	51.5	47.4	45.5	47.8	48.6	45.4	46.1	44.3	42.5	48.3
1979–0	41.8	38.4	36.6	32.9	32.8	30.0	27.4	29.4					
1980–1													

Source: Department of Agriculture

Pepper

Preliminary data indicated that world pepper exports in 1980 recovered to their 1978 level reflecting larger shipments by Brazil, Indonesia, and India. World exports of black and white pepper from principal producing countries in 1979 approximated 110,000 tonnes, down from the 1978 level of about 120,000 tonnes. World pepper prices trended lower during 1980 and into the first quarter of 1981. Brazil's abundant supplies and aggressive selling posture played a significant role in the 1980 to 1981 market decline.

New York spot prices for Brazilian black pepper averaged 83.3 cents per pound in 1980, down from 91.9 cents a year earlier. Prices during January 1981 averaged 69.5 cents, but fell to 67 cents in February and to 65 cents per pound during March. Indonesian Lampong black pepper prices averaged 87.6 cents per pound in 1980, compared with 93.7 cents in 1979. Prices for Indonesian pepper continued to fall during the January–March 1981 period, averaging about 10 cents per pound higher than Brazilian pepper.

India's 1980/81 (November–October) pepper crop was forecast at 39,500 tonnes, up slightly from the 1979/80 harvest of 38,000 tonnes and well above the 1978/79 crop of 35,000 tonnes. Domestic consumption was estimated at 14,500 tonnes, leaving about 25,000 tonnes of the new crop available for the export market. Provisional data for 1980 placed India's exports at 26,759 tonnes, well above the 1979 shipments of 20,545 tonnes. The major recipients of the 1980 exports were the USSR with 12,345 tonnes, the U.S.—3,729, Italy—1,429, Romania—1,349, Algeria—1,184, and Poland with 1,100 tonnes. With large supplies in the offing, exports in 1981 were also expected to be at high levels.

Indonesian pepper exports in 1979 were only 24,986 tonnes, 33 percent below 1978 shipments of 37,090 tonnes. Exports for 1980 were estimated to have been above 1979 exports because shipments during the January–September period ran 7 percent ahead of the corresponding months a year earlier. Crop prospects for 1981 indicated a good harvest and ample supplies for the export market.

Brazil's pepper exports in 1980 were a record 31,964 tonnes, 27 percent above 1979 exports of 25,186 tonnes. High interest rates and tight credit forced producers and exporters to liquidate stocks, which depressed prices. With prices declining and production costs increasing, growers cut back on expenditures for fertilizer and spray materials, which was expected to have an adverse effect on the 1981 harvest and exports.

Malaysia's pepper production in 1980 was about 39,000 tonnes, up from 35,000 tonnes in 1979. Exports from Sarawak in 1980, however, fell below the 1979 level of 36,118 tonnes, reflecting lower European demand and intensified competition from other supplying countries. With new pepper grading facili-

World Exports of Pepper (Black & White) by Major Producing Countries In Metric Tons

Year	Brazil	India	Indonesia	Singapore[2]	Malagasy Rep.	Sarawak	Sri Lanka
1970	9,018	19,657	2,457		2,161	24,405	858
1971	17,235	16,901	23,566		1,284	26,914	46
1972	15,297	20,627	22,756		3,826	26,177	107
1973	13,761	27,942	25,452		3,193	22,830	518
1974	15,491	28,569	15,188		2,241	28,933	337
1975	17,944	24,399	14,525		3,461	29,815	96
1976	19,986	17,813	29,481		2,958	34,850	10
1977	17,099	25,892	30,856		3,748	26,795	635
1978	29,505	19,370	37,090	40,904	1,137	30,780	1,205
1979[1]	25,186	20,545	24,986	38,395	N.A.	36,118	876

[1] Preliminary. [2] Reexports. *Source: Foreign Agricultural Service, U.S.D.A.*

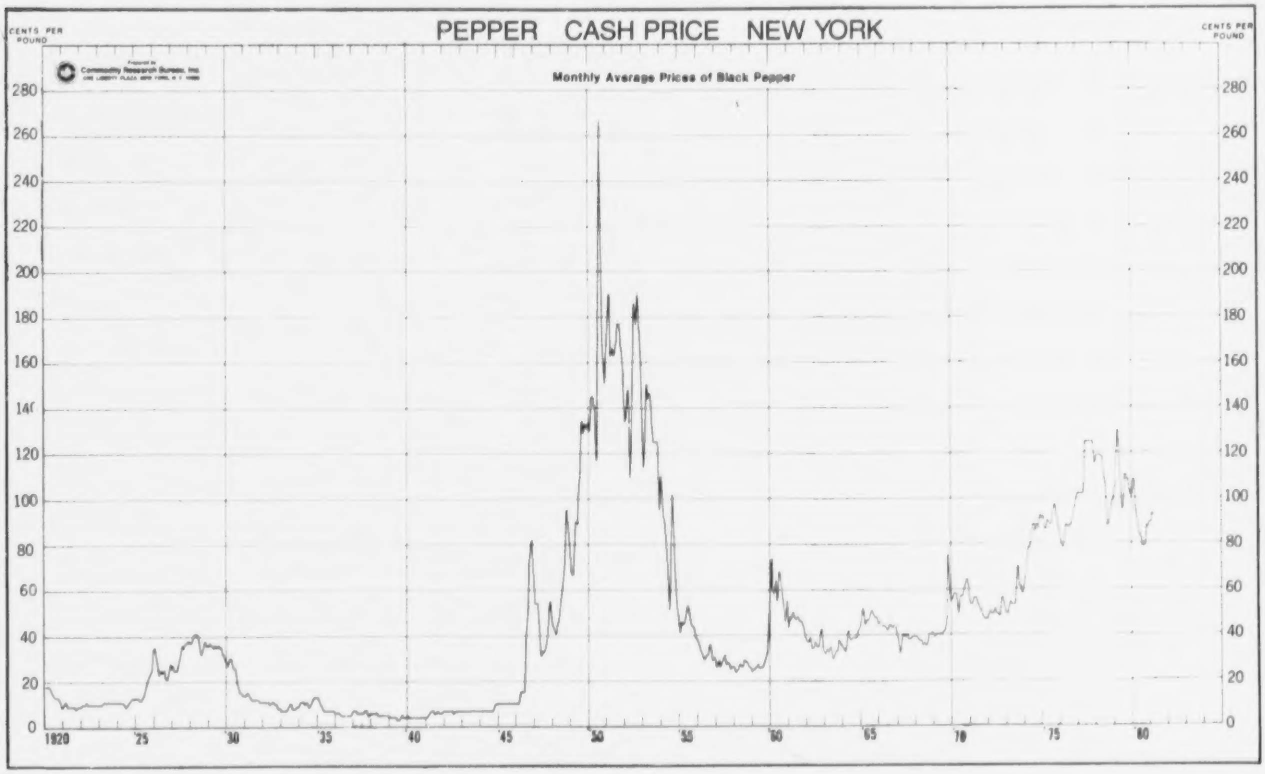
United States Imports of Pepper from Specified Countries In Metric Tons[2]

	Black Pepper									White Pepper					
Year	Brazil	Spain	Sri Lanka (Ceylon)	India	Indonesia	Malaysia	Singapore	China	Total	Brazil	China	Indonesia	Malaysia	Singapore	Total
1968	8,021	—	603.2	2,578	34,217	1,626	1,199		48,827	121.2	—	3,848	101.4	134.4	4,239
1969	11,367	—	999.2	2,749	29,182	1,698	2,351		48,390	864.0	—	4,019	67.2	413.3	5,610
1970	9,018	—	970.6	8,452	13,315	8,307	2,376		42,675	137.4	—	4,562	207.2	548.8	5,639
1971	13,433	—	28.5	6,993	25,767	6,543	1,895		54,941	88.2	—	4,069	329.4	336.2	4,915
1972	8,869	—	—	2,753	28,911	5,088	1,778		47,440	148.8	—	4,875	158.2	210.1	5,449
1973	8,630	—	302	9,690	29,627	544	849		49,827	730.9	—	4,446	58.3	330.1	5,588
1974	6,914	—	90	16,277	19,627	5,415	1,283	—	49,781	121.4	—	5,627	189.8	155.7	6,327
1975[2]	6,436	—	41	6,708	4,613	4,487	773	10	23,156	170	—	1,514	63	59	1,813
1976	6,609	—	—	359	11,774	4,037	1,321	3	24,128	53	—	2,118	56	128	2,362
1977	5,282	—	157	4,890	9,466	3,140	478	—	23,540	40	—	2,765	42	63	2,920
1978	10,472	—	186	1,880	10,595	2,293	604	6	26,142	285	--	1,994	64	28	2,382
1979	9,704	—	281	627	10,898	2,644	156	61	24,482	414	10	2,159	51	94	2,756
1980[1]	10,075	17	153	3,993	11,408	3,640	296	1	29,644	509	35	2,419	100	131	3,194

[1] Preliminary [2] Data prior to 1975 are in THOUSANDS OF POUNDS. *Source: Foreign Agricultural Service, U.S.D.A.*

ties in operation, Malaysia was able to export up to ASTA standards and decrease its dependence on shipping via the Singapore entreport.

U.S. imports of pepper in 1980 increased to 32,849 tonnes, valued at $58.5 million, compared with 1979 imports of 27,248 tonnes, valued at $49.4 million, as importers chose to build inventories in a declining market. Most of the increase came from larger imports from India and Malaysia. Pepper is by far the most important spice imported into the United States.



Average Black Pepper Prices in New York (Lampong, Whole Pepper) In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1968	38.8	38.3	37.3	36.8	35.3	36.0	35.3	35.3	40.0	40.0	40.5	39.8	37.9
1969	39.3	40.3	39.5	39.5	40.0	39.5	41.0	42.0	46.0	75.0	58.0	55.0	46.3
1970	56.0	58.0	58.0	54.3	49.0	57.0	57.0	60.0	61.0	64.0	61.0	55.0	57.5
1971	52.5	52.5	56.0	56.0	55.0	52.5	51.0	51.0	48.0	47.0	46.5	47.0	51.3
1972	49.0	49.5	49.0	49.0	51.0	48.5	48.5	48.0	56.0	56.0	52.0	49.3	50.5
1973	49.3	52.0	54.0	53.0	52.5	53.0	65.0	70.0	61.0	61.0	57.5	61.0	57.4
1974	64.0	70.0	78.0	78.0	85.0	88.0	88.0	85.0	87.5	85.5	92.0	91.0	82.7
1975	91.5	87.0	86.0	90.0	89.0	87.5	88.5	95.0	97.0	94.0	87.5	85.0	89.8
1976	81.0	79.0	77.5	88.0	88.0	87.0	87.5	87.5	N.A.	N.A.	N.A.	102.0	86.4
1977	102.0	102.0	102.0	102.0	125.0	125.0	125.0	125.0	125.0	125.0	114.5	N.A.	115.7
1978	118.5	118.5	118.5	118.5	117.5	109.0	107.5	88.0	88.5	95.5	98.5	98.5	106.4
1979	105.0	N.A.	130.0	N.A.	N.A.	95.0	97.0	110.0	108.0	108.0	102.0	101.3	106.3
1980	108.0	101.0	96.3	93.0	87.0	84.3	82.8	79.0	79.0	88.0	86.5	89.3	89.5
1981	88.5	93.3											

Source: Bureau of Labor Statistics (0289–0131)

Petroleum

Total domestic crude oil production averaged 8.56 million barrels per day in 1980, slightly up from the 1979 average of 8.55 million barrels. The total number of oil and gas wells completed in 1980 was 60,809, up over 20 percent from the 49,816 completed in 1979. The 1980 breakdown included 26,985 oil wells, 15,737 gas wells and 18,087 dry holes, according to U.S. Department of Energy (DOE) data. The number of (rotary) drilling rigs in operation averaged 2,910 per month in 1980, compared with 2,177 in 1979. Total footage of wells completed increased by 19 percent to 284.6 million feet from 238.7 million in 1979.

U.S. crude oil imports, excluding those for the Strategic Petroleum Reserve (SPR), decreased by 20 percent in 1980 to a daily average of 5.157 million barrels from 6.452 million in 1979. But total 1980 crude oil input into domestic refineries fell by 8 percent to a daily average of 13.479 million barrels from 14.648 million a year earlier. Stocks of crude oil held at refineries, pipeline terminals and on leases totaled 356.8 million barrels on December 31, 1980, up 5 percent from 339.1 million held a year earlier. Stocks in the SPR, as of December 31, 1980 increased to 107.8 million barrels from 91.2 million a year earlier.

Total petroleum imports (crude and products, including those for the SPR) averaged 6.79 million barrels per day in 1980, compared with the 1979 rate of 8.45 million.

In 1980, price rises and a generally slow economy reduced consumption and led to growth in stocks, despite lower imports. The impact of accelerated deregulation of crude and products prices begun in January 1981 by the then-new Reagan Administration was expected to be greatest during the first 6 months of 1981.

Total domestic refined petroleum products supplied (domestic usage) averaged 17.03 million barrels per day in 1980 down 8 percent from 18.51 million in 1979. Daily demand for motor gasoline accounted for 39 percent of the 1980 average daily total, falling to an average of 6.58 million barrels a day from 7.03 million in 1979. End of December 1980 stocks of gasoline were estimated at 261.1 million barrels, up from 237.1 million a year earlier. Domestic usage (product supplied) for residual fuel oil fell to an average 2.50 million barrels per day in 1980 from 2.83 million in 1979. Ending stocks were put at 90.3 million barrels, down from 95.6 million on December 31, 1979. Distillate fuel oil domestic usage (product supplied) slipped to 2.87 million barrels average per day from 3.31 million in 1979, while stocks decreased to an estimated 205.1 million barrels on December 31, 1980 from 228.7 million on December 31, 1979. These fuel oil figures reflected the lower consumption despite the cold winter.

Prices

The actual domestic wellhead price for crude oil averaged $21.57 a barrel in 1980, up 70 percent from the 1979 average of $12.64. On a same-month basis, the price rose 50 percent from $17.03 in December 1979 to $25.61 in December 1980. The refiner acquisition cost for domestic crude rose over 50 percent to $28.55 per barrel in December 1980 from $18.84 a year earlier. The refiner cost for imported oil increased 23 percent to $35.63 from $28.91 per barrel during the same period. DOE estimates put the composite acquisition cost at $31.39 a barrel in December 1980, up 32 percent from $23.63 a year earlier. The composite represents the average costs of domestic and imported crude oil, including transportation and fees.

Gasoline prices rose 40 percent in 1980, from $.87 to $1.22 a gallon. Retail prices for heating oil rose from 71 cents a gallon in 1979 to 98 cents (estimated 1980 national average). Natural gas prices increased from an average of $3.23 per million cubic feet in 1979 to an estimated $3.91 in 1980. The landed cost of crude oil rose from approximately $20 a barrel in 1979 to $33 in 1980.

International Developments

World spot market prices for crude oil showed significant gains in late 1980 due to the Iran-Iraq war and the December 1980 OPEC price increases. Price increases announced at the December 1980 OPEC meeting caused average landed prices of crude oil to rise from $32 to $40 a barrel. Landed prices of crude oil of $47.50 a barrel were thought possible for 1981.

The average crude price paid by domestic refiners was expected to rise in 1981 to $42.30 to the end of 1981, an increase of 50 percent. Under 1978 decontrol legislation, domestic refiner prices of crude oil must increase faster than the price of imported crude. As a result, prices for regular gasoline were projected

World Production of Crude Petroleum, by Specified Countries In Millions of Barrels (42 Gallons Each)

Year	Argentina	Canada	China	Libya	Iran	Iraq	Kuwait	Nigeria	Mexico	Indonesia	Romania	U.S.S.R.	Saudi Arabia	United States	Venezuela	World Total
1970	143	461	N.A.	1,209	1,397	570	1,090	396	157	312	102	2,595	1,387	3,517	1,353	16,690
1971	155	492	N.A.	1,008	1,662	624	1,068	558	177	326	102	2,778	1,642	3,454	1,295	17,663
1972	158	561	N.A.	820	1,839	529	1,201	665	185	396	105	2,896	2,202	3,455	1,178	18,601
1973	154	648	N.A.	794	2,139	737	1,102	750	191	489	107	3,094	2,773	3,361	1,229	20,368
1974	151	617	475	555	2,198	721	930	823	238	502	108	3,374	3,096	3,203	1,086	20,538
1975	144	521	572	551	1,953	826	762	652	294	477	109	3,609	2,583	3,052	856	19,498
1976	146	489	646	704	2,168	884	700	756	327	550	110	3,822	3,054	2,976	840	21,192
1977[2]	157	482	654	759	2,080	827	651	765	358	615	109	3,991	3,290	2,985	817	21,826
1978[2]	168	480	732	732	1,980	898	920	765	440	597	100	4,100	3,030	3,000	790	21,900
1979[1]	N.A.	546	774	745	1,156	1,269	913	840	553	581	N.A.	4,187	3,479	3,121	860	22,776
1980[1]	N.A.	520	772	652	607	918	604	750	707	576	N.A.	4,278	3,614	3,138	791	21,701

[1] Estimate. [2] Preliminary. *Source: Bureau of Mines*

to reach an average of $1.80 a gallon by the fourth quarter of 1981. Distillate fuel prices were expected to rise from $1.16 to $1.48 a gallon, while natual gas prices were expected to go from $4.29 to $4.49 per million cubic feet.

Any change in the status of the Iran-Iraq war was expected to affect world oil prices, since approximately 28 percent of all oil traded in the world market passes through the Strait of Hormuz.

Futures Markets

Heating oil futures are traded on the New York Mercantile Exchange (NYMEX). Trading in Gasoil futures was initiated April 6, 1981 on the International Petroleum Exchange (IPE) in London. (See feature study on heating oil.)

Production of Major Refined Petroleum Products in Continental U.S. In Millions of Barrels

Year	Asphalt[2]	Coke[3]	Fuel Oil Distillate	Fuel Oil Residual	Gasoline[4]	Petro-Chemical Feedstocks	Special Naphthas	Miscel. pdt's.	Total Jet Fuel	Kerosene	Liquified Gases[7] (For Fuel)	Lubricants	Road Oil	Still Gas[5]	Wax[6]
1969	135.7	102.9	848.4	265.9	2,028	98.4	28.9	17.9	321.7	102.9	75.7	65.1	9.1	160.4	6.4
1970	146.7	107.9	897.1	257.5	2,105	100.4	30.6	15.7	301.9	95.7	80.9	66.2	9.4	163.9	6.3
1971	157.0	109.1	912.1	274.7	2,203	110.9	28.6	15.4	304.7	87.5	88.6	65.5	8.8	157.0	6.9
1972	155.3	119.8	963.6	292.5	2,320	124.0	32.4	16.4	310.0	80.1	84.5	65.3	7.9	171.0	6.1
1973	167.9	132.3	1,030.2	354.6	2,402	132.6	33.1	19.9	313.7	80.1	89.6	68.7	7.3	176.8	6.8
1974	164.2	123.7	974.0	390.5	2,337	134.8	33.5	25.2	305.1	56.9	81.6	70.7	7.2	175.7	6.9
1975	144.0	129.2	968.4	451.0	2,394	122.2	27.3	32.2	318.0	55.7	80.5	56.2	4.9	175.4	5.7
1976	139.7	130.1	1,070	504.0	2,517	164.4	32.6	47.2	335.8	55.7	84.2	61.8	3.2	180.7	7.0
1977	154.1	133.8	1,197	639.0	2,582	191.4	31.4	53.0	355.7	62.0	85.3	64.5	3.3	192.5	7.2
1978	172.9	134.6	1,156	608.6	2,631	223.1	36.7	47.0	353.9	56.3	87.5	69.5	3.2	200.0	6.9
1979[1]	168.8	137.3	1,151	615.6	2,515	252.1	36.6	42.7	369.2	66.8	84.7	71.0	1.6	205.1	6.9
1980[1]	141.2	135.5	974.9	577.1	2,394	254.6	36.5	38.5	365.6	50.3	87.0	65.1	2.5	190.3	6.4

[1] Estimated. [2] 5.5 barrels = 1 short ton. [3] 5 barrels = 1 short ton. [4] Finished. [5] 1 barrel = 3.600 cubic feet. [6] 1 barrel = 280 pounds. [7] Liquefied refinery gases. *Source: Bureau of Mines*

United States Production of Crude Petroleum In Millions of Barrels

Year	Arkansas	California	Colorado	Illinois	Kansas	Louisiana	Michigan	Mississippi	Montana	New Mexico	Oklahoma	Alaska	Texas	Utah	Wyoming	Total U. S.
1970	18.0	372.2	24.7	43.7	84.9	906.9	11.7	65.1	37.9	128.2	223.6	83.6	1,250	23.4	160.3	3,517
1971	18.3	358.5	27.4	39.1	78.5	935.2	11.9	64.1	34.6	118.4	213.3	79.5	1,223	23.6	148.1	3,454
1972	18.5	347.0	32.0	34.9	73.7	891.8	13.0	61.1	33.9	110.5	207.6	72.9	1,302	26.6	140.0	3,455
1973	18.0	336.1	36.6	30.7	66.2	831.5	14.6	56.1	34.6	101.0	191.2	72.3	1,295	32.7	141.9	3,361
1974	16.5	323.0	37.5	27.6	61.7	737.3	18.0	50.8	34.6	98.7	177.8	70.6	1,262	39.4	140.0	3,203
1975	16.1	322.2	38.1	26.1	59.1	650.8	24.4	46.6	32.8	95.1	163.1	69.8	1,222	42.3	135.9	3,057
1976	18.1	326.0	39.0	26.3	58.7	606.5	30.4	46.1	32.8	92.1	161.4	63.4	1,190	34.3	134.1	2,976
1977	20.2	349.7	39.4	25.7	57.5	562.9	33.0	43.0	32.7	87.1	156.4	169	1,138	32.9	111.8	2,985
1978	20.3	347.2	36.8	23.4	56.6	532.7	34.7	42.0	30.5	83.4	150.5	449	1,074	31.4	137.4	3,178
1979[1]	18.9	352.3	32.3	21.8	57.0	489.7	34.9	37.3	30.0	79.6	143.6	511	1,018	27.7	131.9	3,121
1980[1]	18.2	356.6	29.6	22.9	60.2	467.0	32.8	36.5	29.6	75.5	152.0	592	975	25.7	129.3	3,147

[1] Preliminary. *Source: Bureau of Mines*

Percentage Yields of Refined Products[1] from Crude Petroleum in the United States
Computed on Total Crude Run to Stills

Year	Gasoline	Kerosene	Distillate Fuel Oil	Residual Fuel Oil	Lubricants	Jet Fuel	Coke	Asphalt	Petro-Chemical Feedstocks	Still Gas	Liquefied Gases
1970	45.3	2.3	22.4	6.4	1.6	7.5	2.7	3.6	2.5	4.1	3.0
1971	46.2	2.1	22.0	6.6	1.6	7.4	2.6	3.8	2.7	3.8	2.9
1972	46.2	1.8	22.2	6.8	1.5	7.2	2.8	3.6	2.9	3.9	2.8
1975	45.6	1.7	22.5	7.7	1.5	6.8	2.9	3.6	2.9	3.9	2.8
1974	45.9	1.3	21.8	8.7	1.6	6.8	2.8	3.7	3.0	3.9	2.6
1975	46.5	1.2	21.3	9.9	1.2	7.0	2.8	3.2	2.7	3.9	2.4
1976[2]	45.5	1.1	21.8	10.3	1.3	6.8	2.6	2.8	3.3	3.9	2.4
1977[3]	43.4	1.3	22.6	12.5		6.6					
1978[3]	45.4	1.2	21.6	11.2		6.4					
1979[3]	42.6	1.3	21.5	12.6		7.1					
1980[3]	44.2	1.2	21.0	12.1		7.0					

[1] Finished products. [2] Preliminary. [3] Estimate. *Source: Bureau of Mines*

Stocks of Petroleum & Products in the United States on January 1 In Millions of Barrels

Year	Crude Petroleum	Nat. Gas Liquids	Refined Products														
						Fuel Oil											
			Total	Asphalt[2]	Coke[3]	Distillate	Residual	Finished Gasoline	Petro-Chemical Feedstocks	Jet Fuel	Kerosene	Liquefied Gases (For Fuel)	Lubricants	Road Oil	Wax[4]	Unfinished Oils (Net)[5]
1970	265.2	60.9	656.0	16.8	5.2	171.7	58.4	217.4	2.8	28.1	26.8	4.8	14.1	.9	1.0	97.8
1971	276.4	66.0	635.5	15.8	5.3	195.3	54.0	214.3	3.6	27.6	27.6	5.4	14.7	.6	1.0	99.0
1972	259.6	88.4	677.5	21.2	7.4	190.6	59.7	223.8	3.9	27.7	24.4	7.0	15.0	.9	1.1	100.6
1973	246.4	79.2	611.7	21.6	7.8	154.3	55.2	217.1	2.8	25.5	19.1	7.5	13.3	1.3	1.1	94.8
1974	242.5	94.1	658.8	15.0	10.0	196.5	53.5	213.4	2.4	28.5	21.0	7.4	12.2	.8	1.0	99.2
1975	265.0	108.4	695.0	21.4	5.4	200.1	59.7	221.9	3.5	29.4	15.3	5.8	16.1	1.1	1.2	106.0
1976	271.4		747.9	22.8	7.4	208.8	74.1	238.0	2.9	30.4	15.6	8.4	14.3	.6	.9	106.4
1977	285.5		707.7	19.4	10.6	186.0	72.3	234.3	4.7	32.1	12.5	6.9	12.3	.2	.7	110.5
1978[1]	347.6		841.8	18.7	10.2	250.3	89.7	260.7	3.9	34.6	18.0	7.5	12.1	.3	.6	113.2
1979[1]	376.3		784.6	20.9	11.1	216.5	90.2	240.8	4.4	33.7	14.3	7.1	12.2	.3	.8	108.7
1980[1]	339.1		778.6	18.9	5.2	228.7	95.6	239.9	4.0	38.5	15.8	6.0	12.5	.3	.7	117.7
1981[6]	357.7		788.8	18.8	4.3	205.1	90.3	264.2	5.9	42.0	11.6	6.4	13.5	.3	.5	126.5

[1] Preliminary. [2] 5.5 bbls. = 1 s. ton. [3] 5 bbls. = 1 s. ton. [4] 1 bbl. = 280 lbs. [5] And misc. products. [6] Estimate.
Source: Bureau of Mines

Exports[2] of Petroleum and Products from the United States In Thousands of Barrels[1]

Year	Crude	Refined Products											
					Fuel Oil		Lubricants						
		Total Refined	Finished Gasoline	Kerosene (Incl. Range Oil)	Distillate	Residual	Grease	Oil	Wax	Coke	Asphalt	Liquified Gases	Misc. Oils
1970	4,991	89,467	1,370	121	898	19,785	293	15,797	1,808	30,557	356	9,955	1,071
1971	503	81,342	1,649	181	2,761	13,217	235	15,590	1,660	27,069	306	9,390	1,028
1972	187	81,202	656	91	1,211	12,060	227	14,769	1,130	31,118	333	11,469	1,058
1973	697	83,716	1,664	85	3,231	8,507	251	12,496	965	34,976	340	9,955	1,187
1974	1,074	79,417	1,013	36	855	4,969	277	11,659	879	41,244	410	9,038	1,207
1975	2,146	74,282	850	52	267	5,342	265	8,846	607	37,253	320	9,488	1,124
1976	2,941	78,658	1,297	40	421	4,210	261	9,234	625	37,778	267	8,993	1,112
1977	18,255	70,333	725	23	519	2,305	256	9,388	734	37,393	223	6,483	1,339
1978[3]	57,728	74,329	470	40	1,202	4,634	288	9,399	543	40,438	138	7,238	171
1979[3]	85,707	86,149	155	25	1,079	3,266	279	8,275	836	53,270	181	5,414	163
1980[4]	103,908	94,289	494	32	1,238	12,232	246	8,322	736	49,872	247	7,826	210

[1] 42 gallons per barrel. [2] Includes shipments from Noncontiguous Territories. [3] Preliminary. [4] Estimate.
Source: Bureau of Mines

Imports[2] of Petroleum & Products into the United States In Thousands of Barrels (42 Gallons Per Barrel)

Year	Crude	Refined Products												
				Fuel Oil										
		Total Refined	Asphalt	Distillate	Residual	Finished Gasoline	Jet Fuel	Kerosene	Liquified Pet. Gases	Lubricants	Petrochemical Feedstocks	Special Naphthas	Unfinished Oils	Wax
1970	483,293	725,508	6,201	53,826	557,845	24,320	52,696	1,451	18,921	224	5,352	2,297	39,261	117
1971	613,417	760,949	7,216	55,783	577,700	21,658	65,712	189	25,655	10	5,109	1,824	45,193	93
1972	811,135	847,046	9,263	66,449	637,401	24,787	71,174	526	32,401	669	3,178	863	45,705	335
1973	1,183,996	1,009,992	8,444	143,149	676,225	48,759	77,557	785	48,002	2,091	3,825	88	50,161	1,067
1974	1,269,155	885,200	11,252	105,579	579,157	74,402	59,396	1,744	44,971	1,786	4,364	938	44,228	956
1975	1,498,181	672,197	4,956	56,678	446,528	67,249	48,523	1,073	40,727	1,335	2,061	43	12,985	684
1976	1,935,012	705,256	3,905	53,520	517,325	47,774	27,983	3,163	47,436	1,361	1,370	45	11,735	654
1977	2,397,468	767,925	1,483	90,504	492,581	78,434	27,117	6,869	58,927	3,270	4,954	972	11,239	—
1978[1]	2,319,826	716,868	907	63,288	494,640	69,518	31,346	4,031	40,889	2,978	2,994	1,750	9,913	—
1979[1]	2,355,107	680,825	1,448	70,489	420,144	66,006	28,566	3,298	62,576	3,441	3,934	3,480	21,372	0
1980[3]	1,894,615	566,108	1,414	50,780	336,579	51,071	29,521	3,690	56,711	2,667	10,245	3,354	19,659	0

[1] Preliminary. [2] Includes shipments to Noncontiguous Territories. [3] Estimate. *Source: Bureau of Mines*

PETROLEUM

Crude Petroleum Refinery Operations Ratio[1] In Percent of Capacity

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1969	86	94	92	92	90	92	94	92	92	90	92	94	92
1970	93	93	93	91	86	90	87	89	89	87	89	88	90
1971	88	88	88	86	83	89	88	87	85	85	85	86	86
1972	85	85	85	84	86	89	89	89	91	89	89	91	88
1973	91	90	90	90	90	94	94	93	92	94	91	89	91
1974	84	81	82	85	89	91	91	90	86	87	87	88	87
1975	85	85	83	82	83	86	89	89	89	85	87	88	86
1976	86	88	87	86	87	93	94	91	89	86	90	91	89
1977	89	93	90	89	89	91	91	90	91	89	89	88	90
1978	85	84	85	83	89	88	88	91	90	89	91	90	88
1979	80	84	83	84	84	86	87	86	84	83	84	85	85
1980	82	81	78	76	75	77	74	73	74				
1981													

[1] Based on the ratio of the daily average crude runs to stills to the rated capacity of refineries per day.
Source: Bureau of Mines

Production[1] of Crude Petroleum in the United States In Millions of Barrels of 42 Gallons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1969	275.5	250.0	280.7	277.2	290.0	288.9	288.2	281.1	278.9	285.6	280.4	295.4	3,372
1970	293.8	268.0	294.7	287.7	295.2	280.8	285.2	296.4	295.6	310.4	301.3	308.3	3,517
1971	299.3	272.4	302.8	293.1	299.0	288.1	293.2	291.7	274.1	284.0	274.2	282.1	3,454
1972	282.5	270.7	293.3	285.4	298.0	285.6	294.4	294.0	285.2	293.9	282.8	289.4	3,455
1973	284.5	263.1	287.4	278.8	287.1	276.4	285.7	284.2	272.0	285.9	274.8	281.0	3,361
1974	277.0	256.0	277.9	268.6	276.2	263.4	272.2	269.7	253.3	266.9	257.1	264.3	3,203
1975	262.1	240.6	263.3	253.7	259.7	252.6	258.4	255.7	248.4	258.1	248.3	255.9	3,057
1976	254.6	237.7	253.4	242.4	253.2	244.3	251.2	250.3	245.6	249.5	241.3	248.2	2,972
1977[2]	241.5	225.9	248.7	242.4	248.3	241.2	249.2	255.5	252.5	263.7	255.4	261.1	3,007
1978[2]	258.8	234.4	237.0	261.2	272.8	264.7	271.2	272.4	263.6	273.8	262.2	268.5	3,178
1979[2]	262.2	238.0	266.1	256.0	266.1	252.3	259.0	269.7	254.0	265.6	259.5	267.0	3,121
1980[2]	268.1	252.2	270.1	260.6	267.8	256.4	265.2	261.1	258.6				
1981													

[1] Represents oil transported from producing properties, plus that remaining on properties & consumed on leases. [2] Preliminary.
Source: Bureau of Mines

Average Price of Crude Petroleum at Wells[1] Index (1967 = 100)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1973	114.7	114.7	114.9	117.1	122.0	125.3	125.8	125.8	133.3	133.3	139.3	146.2	126.0
1974	178.4	201.7	201.7	201.7	201.7	201.7	224.4	225.2	225.4	236.2	231.0	223.0	211.8
1975	223.1	228.6	230.2	232.2	234.2	256.0	250.4	256.1	256.1	257.8	261.0	262.6	245.7
1976	263.3	242.3	242.5	245.0	246.0	248.0	254.3	254.3	254.3	264.4	264.4	264.4	253.6
1977	262.9	274.2	270.0	271.0	271.0	271.8	270.8	273.1	276.1	278.6	282.9	288.1	274.2
1978	288.8	289.7	293.4	294.3	295.5	298.9	301.8	302.7	305.7	307.5	310.5	312.4	300.1
1979	316.4	322.3	324.2	326.2	335.7	356.4	370.6	385.7	422.1	436.7	450.4	470.8	376.5
1980	513.6	515.1	522.8	533.9	540.1	549.0	551.4	566.8	570.8	579.6	580.7	596.0	551.7
1981	615.2	842.9											

[1] Buyers posted prices. *Source: Bureau of Labor Statistics*

Average Wholesale Prices of Gasoline[1] (Regular Grade—Leaded) Index (Feb. 1973 = 100)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1974	136.7	147.0	161.4	172.1	177.3	188.5	196.6	196.1	197.4	196.2	186.7	184.9	178.4
1975	187.0	189.1	191.1	193.3	199.0	206.8	215.5	228.9	233.7	235.1	233.0	229.5	211.8
1976	227.3	226.4	221.7	219.1	220.6	229.2	239.4	243.2	245.0	244.7	243.8	242.2	233.6
1977	239.9	240.4	245.6	249.5	254.5	258.9	261.2	260.5	259.6	257.5	256.3	255.8	253.6
1978	255.1	252.8	252.0	253.0	255.5	260.5	266.4	271.3	275.1	278.1	277.5	282.7	265.0
1979	287.0	292.3	299.9	313.0	331.6	349.3	371.0	397.7	422.1	439.2	488.3	459.6	367.6
1980	481.1	517.5	560.4	585.4	595.5	598.6	601.1	602.9	599.6	591.5	590.5	595.9	576.6
1981	607.2	632.1											

[1] Excludes aviation. *Source: Bureau of Labor Statistics*

Average Retail Price of Gasoline[1] (Regular—Excl. Taxes[2]) 55 Cities In Cents Per Gallon

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1974	32.8	36.1	38.1	39.6	41.7	43.5	43.6	43.7	43.0	40.9	40.7	41.2	40.4
1975	42.3	42.2	42.5	42.8	43.8	45.2	47.4	48.0	48.0	48.1	47.6	47.6	45.5
1976	46.8	46.2	45.6	45.2	46.1	47.9	48.5	48.7	48.7	48.7	48.6	48.3	47.4
1977	48.4	48.8	49.6	50.3	51.0	51.7	51.7	51.7	51.5	51.8	51.3	51.1	50.7
1978	51.2	51.1	51.0	51.2	51.7	52.4	53.3	54.2	54.5	54.7	55.4	56.4	53.1
1979[2]	68.4	70.0	73.2	77.2	81.4	87.8	93.1	96.8	99.0	99.8	101.1	105.1	87.8
1980	112.7	119.0	122.6	122.9	123.4	123.7	123.5	123.3	122.1	121.7	122.0	123.3	121.7
1981	127.8	137.2											

[1] Excludes aviation—mid-month. [2] Beginning 1979, prices includes taxes. *Source: U.S. Dept. of Commerce*

Stocks of Crude Petroleum[1] in the United States at Beginning of Month In Millions of Barrels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1968	249.0	244.9	245.3	256.9	262.1	262.0	264.9	265.8	266.4	262.8	266.3	271.6
1969	272.2	279.5	265.3	264.2	273.2	281.3	284.5	277.5	267.7	262.5	264.3	264.8
1970	265.2	267.1	269.6	274.6	278.0	284.8	279.9	266.9	254.1	259.2	265.5	271.3
1971	276.4	269.8	266.9	267.2	271.4	284.3	279.3	273.2	272.4	269.8	265.9	265.2
1972	259.6	251.0	252.9	258.9	266.6	279.5	271.4	265.8	258.0	250.8	253.7	251.3
1973	246.4	237.5	235.4	244.1	248.8	257.9	248.9	243.7	248.3	241.3	246.3	250.0
1974	242.5	233.0	240.7	244.7	256.4	269.5	268.8	268.7	264.8	266.7	269.4	271.1
1975	265.0	270.5	276.8	280.0	281.9	281.0	276.1	264.2	256.6	259.4	269.6	271.0
1976	271.4	289.3	277.4	283.1	286.6	284.0	281.7	282.6	277.3	284.4	297.7	298.8
1977[2]	285.5	294.0	291.4	299.5	318.6	328.6	333.6	335.2	338.3	334.2	343.2	350.2
1978[2]	347.7	351.2	350.1	363.8	365.0	354.6	363.4	367.9	357.7	368.3	377.9	381.4
1979[2]	376.3	375.9	381.1	399.9	403.6	403.2	414.5	403.0	411.9	415.0	435.9	438.6
1980[2]	430.3	444.8	452.8	452.9	470.5	475.1	473.2	470.5	478.8	468.8		
1981												

[1] Total gasoline-bearing in the U.S. [2] Preliminary. *Source: Bureau of Mines*

United States Production of Gasoline[1] In Millions of Barrels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1968	159.4	147.6	153.4	147.0	160.7	162.3	170.3	170.3	167.2	166.6	162.4	172.9	1,940
1969	159.2	151.6	163.9	154.3	167.1	166.0	177.8	179.6	174.3	177.1	175.3	182.1	2,028
1970	176.5	157.0	173.4	164.3	172.5	173.8	180.6	183.0	180.8	177.7	175.6	190.2	2,105
1971	185.2	167.0	180.8	170.4	174.3	181.4	192.7	196.6	186.1	188.2	183.1	196.9	2,203
1972	192.6	175.2	184.9	176.8	188.6	189.1	206.7	206.2	199.8	204.6	194.9	200.7	2,320
1973	197.9	173.0	192.2	192.9	209.8	211.3	218.3	215.4	200.2	207.1	193.2	190.4	2,402
1974	184.2	168.2	186.5	190.5	197.7	201.4	212.2	213.0	195.6	197.8	190.1	200.1	2,338
1975	203.0	176.7	189.2	182.3	191.1	201.2	218.5	214.6	206.0	200.3	199.4	211.3	2,394
1976	201.8	188.6	201.2	197.8	211.1	220.6	223.9	223.3	207.8	208.1	209.3	223.5	2,517
1977[2]	215.8	191.6	214.0	210.2	216.8	215.8	226.4	224.3	213.4	216.0	214.9	222.6	2,581
1978[2]	215.8	186.4	210.1	201.2	220.1	217.8	226.6	232.7	223.4	223.6	228.7	243.9	2,631
1979[2]	226.8	195.3	207.4	204.4	211.9	211.4	219.1	215.4	200.8	202.9	201.2	218.0	2,515
1980[2]	217.5	200.2	203.5	189.5	196.6	198.1	201.7	201.4	192.4				
1981													

[1] Gasoline and naphtha from crude petroleum and natural gasoline used at refineries. [2] Preliminary. *Source: Bureau of Mines*

United States Domestic Consumption of Gasoline In Millions of Barrels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1968	148.0	144.5	155.6	162.7	169.0	166.4	180.5	179.3	159.8	170.1	158.4	161.8	1,956
1969	158.4	145.2	159.7	168.7	177.7	173.1	188.4	185.0	171.0	177.2	163.6	174.5	2,043
1970	163.9	151.0	173.4	171.3	183.6	187.4	195.2	190.4	179.8	184.8	168.4	182.0	2,131
1971	164.6	154.6	182.6	187.6	184.5	195.1	201.0	197.0	183.6	188.6	184.6	189.3	2,213
1972	173.2	166.9	200.5	190.0	201.2	206.2	208.4	216.6	194.9	198.5	195.5	198.8	2,351
1973	190.9	181.5	203.2	197.5	215.7	210.3	218.9	226.9	198.7	208.6	206.0	194.5	2,453
1974	181.2	171.7	192.7	195.0	210.4	209.1	217.1	220.7	193.0	209.7	197.6	204.3	2,402
1975	193.4	171.7	197.1	202.7	214.1	213.5	219.7	218.6	203.2	211.5	192.8	212.0	2,450
1976	199.2	182.5	214.7	215.9	213.5	226.0	228.0	223.7	213.5	215.9	212.2	222.2	2,567
1977[1]	201.2	194.1	215.0	221.5	219.2	229.3	232.3	231.4	220.8	222.2	216.8	229.4	2,634
1978[1]	207.6	193.6	226.2	217.3	241.0	238.8	236.3	245.6	223.5	232.6	226.0	231.9	2,720
1979[1]	214.4	204.3	225.0	213.1	224.5	216.9	213.8	228.9	207.7	218.8	204.4	209.5	2,582
1980[1]	197.2	192.3	199.7	204.9	209.7	201.0	210.0	207.3	196.5				
1981													

[1] Preliminary. *Source: Bureau of Mines*

Stocks of Finished Gasoline on Hand in the United States, at End of Month In Millions of Barrels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1968	220.4	224.2	223.4	209.5	203.1	201.0	193.1	186.1	195.1	193.2	198.9	211.5
1969	214.5	222.6	229.2	216.6	207.7	201.8	193.1	189.4	194.3	195.0	208.4	217.4
1970	231.8	238.8	240.8	235.7	226.4	214.9	201.9	196.4	199.3	194.5	204.0	214.3
1971	237.0	250.5	250.6	235.0	226.2	214.0	207.2	208.4	212.3	212.9	213.6	223.8
1972	244.6	254.8	241.2	229.5	219.2	204.3	204.7	196.8	203.7	211.7	213.2	217.1
1973	226.0	220.0	211.1	208.2	205.3	211.6	215.0	208.6	213.9	218.2	211.4	213.4
1974	221.3	223.0	223.6	226.8	221.9	220.5	222.2	222.1	230.7	224.1	221.9	221.9
1975	228.3	245.9	255.4	252.1	235.7	217.0	210.0	215.2	218.4	229.2	224.5	235.3
1976	238.0	243.4	251.8	241.9	226.6	227.5	227.7	229.4	233.2	232.6	229.1	230.5
1977	234.3	255.5	258.1	264.7	261.5	265.3	259.1	260.8	259.6	258.7	258.0	260.7
1978	260.7	275.3	274.0	262.3	251.6	236.1	222.2	219.1	211.8	219.3	223.2	240.8
1979	258.9	254.4	241.9	237.9	229.7	232.0	244.1	235.2	232.3	211.0	223.3	239.9
1980	264.9	277.3	285.8	275.0	266.0	267.5	263.8	262.2	261.0			
1981												

Source: Bureau of Mines

U.S. Production of Residual Fuel Oil and Distillate Fuel Oils In Millions of Barrels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1968	102.0	99.0	102.0	87.9	91.5	88.8	92.9	91.9	85.5	86.4	89.8	98.8	1,117
1969	97.3	91.5	99.3	90.3	88.5	90.7	93.1	90.2	88.4	90.0	93.9	101.0	1,114
1970	105.5	95.8	101.3	90.6	88.5	89.3	91.2	95.5	93.3	96.7	97.5	109.3	1,155
1971	112.2	99.4	104.5	98.9	94.1	96.8	97.8	97.1	91.0	94.5	94.5	106.0	1,187
1972	107.4	104.9	105.3	96.6	100.9	98.6	99.4	101.1	100.1	107.6	108.4	126.1	1,256
1973	128.5	111.4	112.4	101.7	108.3	112.2	112.8	113.3	110.7	120.8	119.5	133.2	1,385
1974	122.5	96.0	97.3	105.2	114.7	114.3	119.3	117.0	107.6	117.8	120.9	132.1	1,365
1975	132.3	112.9	118.8	111.9	111.1	111.8	116.1	115.9	119.9	121.2	119.4	128.3	1,420
1976[1]	128.7	126.3	127.2	118.2	123.9	123.8	131.1	133.3	128.3	134.8	142.9	155.8	1,574
1977[1]	163.2	158.3	151.8	140.6	148.7	147.3	152.6	152.1	151.9	158.5	151.0	160.0	1,836
1978[1]	152.7	132.6	147.5	134.8	150.4	140.7	145.8	152.3	144.6	150.7	150.8	157.9	1,765
1979[1]	152.3	130.4	146.0	137.4	144.2	140.1	151.4	152.6	150.1	150.6	150.0	158.6	1,766
1980[1]	148.5	131.9	128.5	121.6	123.3	126.6	129.3	121.1	125.5				
1981													

[1] Preliminary. *Source: Bureau of Mines*

Plastics

Plastics materials production volume was expected to advance by about 9 percent in 1981, to more than 42 billion pounds, a substantial increase over 1980. Plastics industry performance was expected to move upward in 1981 in the event of revived construction and automotive markets.

Production of plastics materials reached a low point in 1980, an estimated 38.5 billion pounds, 8 percent below 1979. Operating rates during 1980 were low because of attempts to keep inventories under control. Because customer inventories of plastics appeared to have been relatively low in 1980, 1981 growth in sales was expected to be vigorous.

No shortages of feedstocks were anticipated for 1981 at the estimated level of plastics shipments. Operating rates were expected to resume higher levels from rates below 80 percent in 1980, and new additional capacity also was expected.

Production of plastics materials or synthetic resins depends on having reliable supplies of the basic raw materials—petroleum and natural gas. These materials are processed into the intermediate organic chemicals from which synthetic resins and other chemical products are manufactured. Feedstocks and organic intermediates were in plentiful supply at relatively low prices in 1980.

Capital expenditures in recent years by the industry for new facilities and equipment have been substantial. Expansion of production capacity cannot solve a very basic problem of the industry however—in a period of strong demand, shortages of plastics could develop if supplies of basic feedstocks and petrochemical intermediates are not adequate. The preferred use for the basic raw materials—petroleum and natural gas—may be for energy and heating, at the expense of petrochemicals.

The synthetic resins consumed in the greatest volume are low- and high-density polyethylene (LDPE & HDPE); styrenics, including polystyrene (PS) and ABS; polyvinyl chloride (PVC); and polypropylene (PP). Other plastics materials include polyesters, phenolics, epoxy, acrylics, and polyvinyl acetate. In 1979, LDPE production exceeded 7 billion pounds; production of the other volume resins—styrenics and PVC—amounted to more than 6 billion pounds each; PP production was close to 4 billion pounds; and HDPE, about 5 billion pounds.

Major Markets

Plastics are used in furniture, automobiles, housing, packaging, toys, electronics, and many other applications. Special properties and high-output processing methods, such as injection molding, combine to give plastics a competitive edge over wood, metals, paper, and glass. The rate of substitution of plastics for other materials appears to be moderating in some markets, however, and growth rates are expected to average about 5 percent in real terms in the 1980's.

The automobile industry may be one of the most rapidly growing markets for the plastics materials industry through the 1980's.

The miscellaneous plastics products industry is a residual statistical creation encompassing plastics products not reported in other industries or not captively produced and consumed. Seven major product groups (markets or processes) account for almost 75 percent of the value of shipments of plastic products; these are: (1) film and sheeting, (2) consumer and commercial products, (3) building and construction products, (4) packaging, (5) transportation products, (6) electrical and electronic products, and (7) laminated products. Each of these groups represents a large number of items having generally similar market strengths and potential.

This industry accounts for approximately half of the total consumption of plastics and resins in the United States, and its growth rate is indicative of total plastics products output and use. The value of industry shipments by the miscellaneous plastics products industry was expected to increase 18 percent in 1981, to almost $38 billion.

Exports

The value of U.S. exports of plastics materials in 1980 was estimated at $4.2 billion, and was expected to increase 32 percent in 1981. Exports account for about 23 percent of the value of product shipments.

Growing foreign competition from government-controlled petrochemical and plastics industries may cut into U.S. export markets.

Despite sharply increasing costs of petroleum raw materials, which should raise plastics and resins prices, real growth of plastics products was expected to exceed 4 percent annually between 1980 and 1985.

World Production of Plastics and Resins[3] (Condensation, Polymeization, Etc.)
In Thousands of Metric Tons

Year	Australia	Austria	Czechoslovakia	France	Germany East	Germany West	Italy	Japan	Netherlands	Poland	Belgium	Spain	USSR	United Kingdom	United States
1971	256	215	318	1,310	420	4,708	1,871	5,161	914	257	472	419	1,860	1,481	9,874
1972	290	233	400	1,562	458	5,471	2,176	5,573	1,080	299	626	509	2,040	1,631	12,046
1973	378	276	452	1,928	490	6,434	2,479	6,392	1,314	427	773	592	2,304	2,520	13,706
1974	402	286	390	2,060	517	6,271	2,468	6,722	1,644	395	835	701	2,496	2,419	13,764
1975	362	304	427	1,589	605	5,046	2,053	4,373	1,350	539	661	557	2,844	2,057	10,206
1976	407	404	580	1,530	679	6,444	2,266	4,952	1,723	559	824	847	3,216	2,556	13,261
1977	480	430	738	1,600	734	6,270	2,538	4,978	1,783	583	1,471	1,007	3,300	2,710	11,232
1978	522	434	810	1,645	752	6,703	2,466	5,882	1,962	596	1,682	1,050	3,516	2,621	12,380
1979[1]	618	437	853	1,954	740	7,255	2,562	6,964	3,354	571	1,969		3,504	2,647	13,866
1980[2]	679	490	894	1,942	950	6,710	2,738	6,750	3,200	660	1,924		3,672	2,500	12,800

[1] Preliminary [2] Estimate [3] Refers to production of thermoplastic & thermosetting resins & plastic materials obtained by chemical transformation of natural organic substances or by chemical synthesis. *Source: United Nations*

PLASTICS

Production of Important Synthetic Plastics & Resin Materials in the U.S. In Millions of Pounds

	Cellulose Plastics					Synthetic Plastics and Resins								
	Acetate & Mixed Esters													
Year	Sheets, Rods, & Tubes	Molding & Extrusion	Nitrocellulose, Sheets, Rods, & Tubes	Other Cellulose Plastics	Total	Phenolic Resins	Polystrene & Copolymers	Urea Melamine Resins	Polyvinyl Chloride & Copolymers	Alkyd Resins	Polypropylene	Polyethylene & Copolymers	Polyester Resins	Polymer Resins (Coumarone-Indene)
1970			140.9			1,186	3,550	624	3,756	600	1,031	5,844	646	315
1971			[2]			1,181	3,990	683	4,103	[2]	1,339	6,381	638	[2]
1972			[2]			1,441	4,890	[2]	4,332	[2]	1,731	7,656	[2]	[2]
1973			[2]			1,648	5,156	[2]	4,594	[2]	2,165	8,582	[2]	[2]
1974			[2]			1,512	4,968	[2]	4,821	[2]	2,258	8,821	[2]	[2]
1975			[2]			1,275	3,877	[2]	3,695	[2]	1,903	7,483	[2]	[2]
1976			[2]			1,305	4,743	[2]	4,545	[2]	2,551	8,775	[2]	[2]
1977			[2]			1,797	5,203	[2]	5,267	[2]	2,706	10,100	[2]	[2]
1978			[2]			1,926	5,989	[2]	5,878	[2]	3,055	11,359	[2]	[2]
1979			[2]			1,779	6,327	[2]	6,211	[2]	3,824	12,408	[2]	[2]
1980[1]			[2]			1,427	5,403	[2]	5,504	[2]	3,344	11,419	[2]	[2]

Note: Data included in the table does not cover all Plastics production. Various types of Plastics production of lesser importance are not included because statistics are not available on a consistent basis. Also, many individual firms do not make their production figures known. [1] Preliminary. [2] No longer available. *Sources: U.S. Tariff Commission, Bureau of Census*

Average Wholesale Price Index of Plastic Materials in the United States (1967 = 100)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
					PE Resin, Low, Pkg. Firm (0662-0301.99)								
1976	178.2	178.4	178.6	190.7	191.5	192.2	193.3	193.2	190.9	189.7	189.9	190.1	188.1
1977	187.7	185.2	189.5	197.7	197.1	196.9	194.8	194.8	194.0	195.2	195.6	195.2	193.6
1978	196.1	196.1	197.0	198.0	198.6	198.0	194.4	190.3	189.3	187.2	184.1	184.1	192.8
1979	186.6	186.9	186.9	203.3	210.1	213.2	225.2	225.0	225.8	243.2	247.0	249.0	216.9
1980	257.2	260.9	N.A.	275.1	270.8	264.0	259.4	254.4	249.4	249.3	251.8	250.9	258.5
1981	251.5	251.2											
					PE Resin, Low, G. P. (0661-0102.10)								
1977	195.1	195.0	197.6	205.8	203.7	201.6	200.4	200.5	199.2	199.8	199.4	199.9	199.8
1978	205.6	200.9	199.9	203.2	203.2	202.1	198.8	196.6	196.6	196.6	196.6	196.5	199.7
1979	201.5	203.1	203.1	219.8	221.3	221.3	237.4	237.6	239.3	261.1	264.2	265.6	231.3
1980	273.3	274.5	N.A.	285.8	286.6	288.6	286.9	280.8	274.4	274.3	274.0	273.2	279.3
1981	N.A.	N.A.											
					Polystyrene Resin, G. P. (0662-0601.99)								
1977	182.7	181.8	181.1	174.9	175.6	175.4	180.5	180.7	181.7	181.8	183.4	183.3	180.2
1978	183.3	183.3	183.3	N.A.	N.A.	N.A.	194.4	194.4	195.4	194.9	194.9	194.5	190.9
1979	205.2	N.A.	210.4	228.5	224.1	N.A.	254.6	269.1	311.2	310.1	312.8	313.9	264.0
1980	321.0	N.A.	326.9	331.6	340.9	337.1	331.3	330.0	318.3	323.2	323.0	325.1	328.0
1981	320.6	N.A.											
					Polystyrene Resin, Rubber Modified (0662-0602.99)								
1976	165.7	174.4	173.2	175.4	176.1	174.9	175.4	174.4	165.7	162.8	162.3	162.5	170.3
1977	162.5	162.1	161.6	157.1	157.2	158.8	161.9	161.7	162.8	163.2	164.4	164.6	161.5
1978	164.6	164.6	164.6	168.3	170.2	N.A.	171.6	171.6	172.7	171.7	171.7	172.1	169.4
1979	180.8	N.A.	N.A.	200.8	213.7	N.A.	220.9	236.7	272.9	272.6	273.3	274.9	238.5
1980	283.5	N.A.	278.8	291.4	291.9	293.2	288.0	287.6	282.1	286.0	287.3	289.4	288.0
1981	290.0	290.8											
					PVC Resin, G. P. (0661-0106.10)								
1976	170.4	180.1	180.1	180.1	179.4	180.1	187.6	186.7	186.7	185.9	185.9	183.9	182.2
1977	176.2	179.0	179.1	182.4	184.3	187.1	190.9	193.8	195.8	193.9	191.3	188.1	186.8
1978	187.0	186.8	187.5	188.4	190.0	193.5	195.4	195.5	194.3	193.4	191.7	196.1	191.6
1979	198.0	200.6	210.6	212.6	216.8	219.0	225.0	232.0	230.9	244.0	245.8	244.7	223.3
1980	252.6	254.4	256.1	264.2	263.0	260.7	255.4	245.1	218.9	216.1	217.0	215.0	243.2
1981	N.A.	N.A.											
					Phenolic Molding Compound (0661-0109.06)								
1976	187.9	187.9	187.9	187.9	187.9	187.9	191.2	195.2	198.6	202.0	202.0	202.0	193.2
1977	202.0	202.0	202.0	205.4	205.4	202.0	202.0	202.0	202.0	202.0	202.0	203.8	202.7
1978	202.0	194.6	195.1	195.1	195.1	195.1	195.1	195.1	192.8	184.9	185.5	185.5	193.0
1979	185.5	185.5	200.3	221.6	230.2	230.2	234.9	233.9	236.0	239.7	242.5	239.7	223.3
1980	239.7	239.7	244.3	246.2	251.3	251.3	250.4	240.2	240.2	240.2	240.2	240.2	243.7
1981	N.A.	N.A.											

Source: Bureau of Labor Statistics

Platinum and Group Metals

In 1980, world production of platinum-group metals was about 6.7 million troy ounces, about unchanged from 1979. The Republic of South Africa increased output slightly and, together with the U.S.S.R., accounted for more than 95% of the world total.

Domestic mine production, all as a byproduct of copper mining, was about 6,000 troy ounces, approximately 18 percent lower than the 1979 level. Secondary production was about 345,000 troy ounces in 1980, 12 percent above 1979.

Essentially all of the annual U.S. requirements for primary platinum-group metals are accounted for by imports. Imports for consumption of platinum-group metals in 1980 totaled 3.5 million troy ounces, a slight increase over the 1979 level. The principal import sources were the Republic of South Africa—54 percent, the United Kingdom—14 percent, and the U.S.S.R.—11 percent.

Consumption of platinum-group metals in the United States as indicated by sales to domestic industries decreased about 20 percent in 1980 to 2.2 million troy ounces, according to the Bureau of Mines. Platinum and palladium accounted for an estimated 50 percent and 41 percent, respectively, of total sales, followed by 4 percent each for rhodium and ruthenium, 1 percent for iridium, and less than 1 percent for osmium. Sales to consuming industries were distributed as follows: Automotive (emission control catalysts)—35 percent; electrical—24 percent; chemical—14 percent; others (dental and medical, petroleum, jewelry, miscellaneous)—27 percent. Sales of platinum and palladium to the automotive industry, which represented about half of the total platinum sales and about a quarter of the total palladium sales in 1980, decreased significantly during the year. Sales of rhodium to the automotive industry increased sharply for the second year, as rhodium use in the newer types of emission catalysts increased. Sales of platinum to the chemical, dental and medical, and electrical industries increased in 1980, with the largest increase noted in sales to the electrical industry for use in electrical contacts and relays. Palladium sales to each of the consuming sectors decreased during the year. Iridium sales nearly doubled in 1980, but sales of other platinum-group metals decreased.

Inventories of platinum-group metals held by refiners, importers, and dealers in 1980 remained at about the 1979 level.

The government stockpiles of platinum (452,645 troy ounces including 13,043 troy ounces of nonstockpile grade), palladium (1,255,003 troy ounces including 2,215 troy ounces of nonstockpile grade), and iridium (16,991 troy ounces) were unchanged during 1980.

Dealers' prices for platinum reached a record high of $985 per troy ounce in March 1980, but ended the year at $565–$575 per troy ounce, and then declined to $456–$465 by early May 1981. Dealers' prices for palladium also peaked in March at a record high of $300 per troy ounce, but dropped to $142–$144 per ounce by December 30, 1980 and to $102–$106 by early May 1981.

Futures Market

Both platinum and palladium futures are traded on the New York Mercantile Exchange.

World Production of Platinum-Group Metals In Troy Ounces

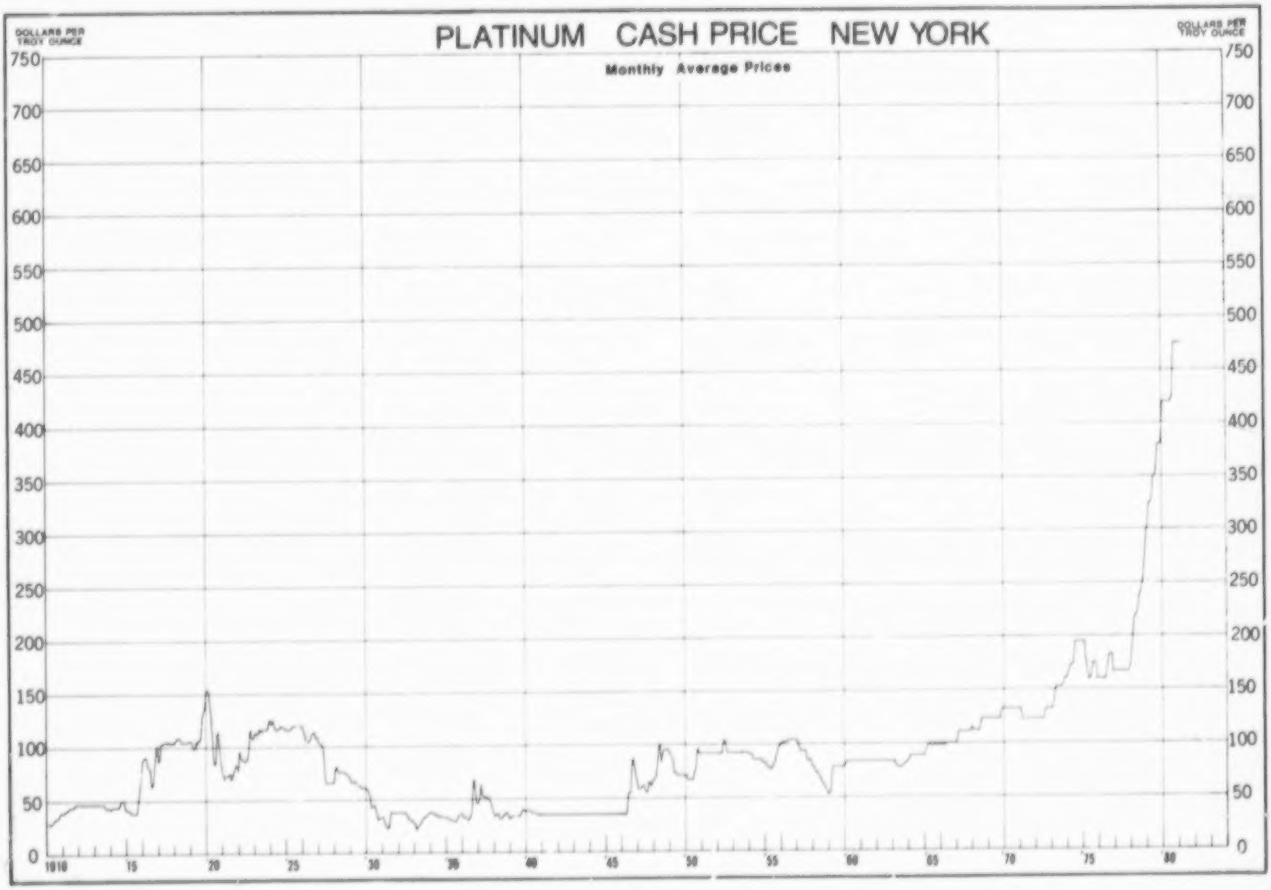
Year	Australia	Philippines	Finland	Canada	Colombia[3]	Ethiopia	Japan	South Africa	U.S.S.R.	United States	Yugoslavia	World Total[1]
1970	—	1,230	645	482,428	26,358	273	7,906	1,502,800	2,200,000	17,316		4,238,956
1971	—	2,459	600	475,169	25,610	217	8,826	1,253,200	2,300,000	18,029		4,084,110
1972	—	7,522	650	406,048	24,111	248	9,899	1,453,000	2,350,000	17,112		4,269,990
1973	975	6,656	725	354,223	26,358	235	10,197	2,362,800	2,450,000	19,980		5,232,149
1974	1,120	3,665	650	384,618	21,094	230	15,205	2,830,000	2,500,000	12,657		5,769,239
1975	1,830	1,415	600	399,218	22,114	162	19,401	2,600,000	2,650,000	18,920		5,713,660
1976	11,108	—	600	416,821	16,779	145	26,795	2,700,000	2,800,000	6,116	N.A.	5,978,364
1977	13,278		640	465,371	17,300	100	32,453	2,870,000	2,900,000	5,545	5,690	6,310,377
1978	13,000		640	346,213	13,939	123	34,145	2,860,000	3,050,000	8,246	5,900	6,332,206
1979[2]	11,500		720	185,000	15,000	100	34,000	3,200,000	3,200,000	7,300	5,700	6,659,520
1980[1]				220,000				3,250,000	3,200,000	6,000		6,740,000

[1] Estimate. [2] Preliminary. [3] Placer platinum. *Source: Bureau of Mines*

Average Price of Palladium (Dealer Prices)[1] In Dollars Per Troy Ounce

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1973	71.00	71.00	68.00	65.00	73.43	77.50	81.75	84.00	84.00	84.00	84.00	84.00	77.31
1974	84.00	84.00	102.00	137.50	140.00	140.00	140.00	141.75	143.80	133.50	132.50	132.50	125.96
1975	124.32	105.00	93.92	90.50	73.27	57.71	55.86	58.30	50.52	47.60	44.00	44.00	70.42
1976	42.00	39.62	37.56	38.50	41.58	48.50	55.75	50.28	53.25	52.99	59.20	52.38	47.63
1977	54.06	58.10	57.82	55.20	52.97	45.18	44.90	42.36	42.20	43.07	48.83	51.97	49.72
1978	55.10	64.86	64.18	59.33	60.82	60.42	59.53	61.86	60.09	71.58	70.74	73.25	63.48
1979	76.14	103.35	95.56	93.97	105.53	124.33	121.40	117.45	136.94	143.63	141.95	163.42	118.62
1980[2]	231	271	230	195	160	170	199	205	213	225	225	225	212.40
1981[2]	225	225	225										

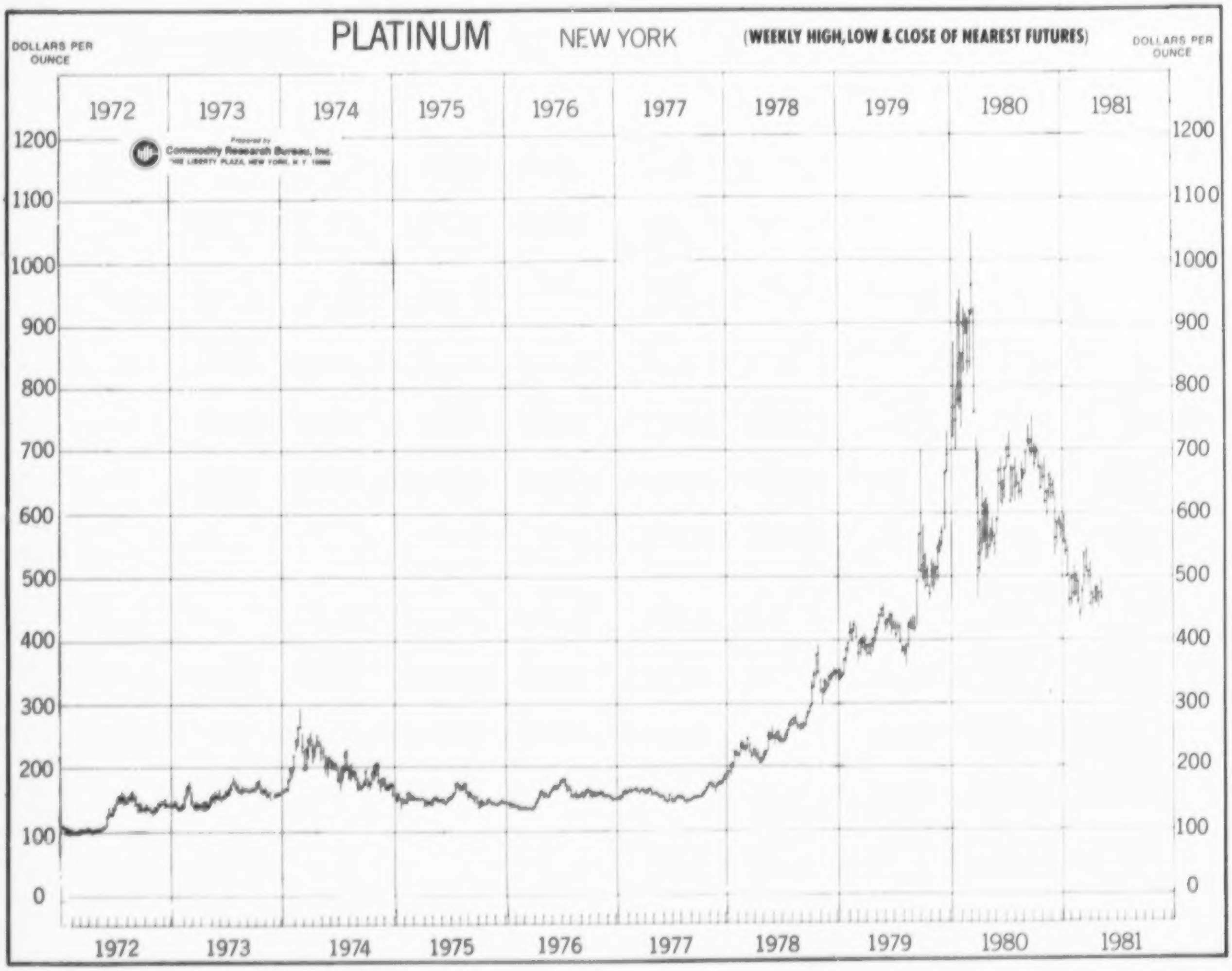
[1] Based on wholesale quantities, prompt delivery. [2] Estimate. *Source: American Metal Market*



Average Price of Platinum in New York In Dollars Per Troy Ounce

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1968	114.00	111.50	111.50	111.50	111.50	111.50	122.50	122.50	122.50	122.50	122.50	122.50	117.21
1969	122.50	122.50	122.50	122.50	122.50	122.50	122.50	122.50	122.50	122.75	132.50	132.50	124.18
1970	132.50	132.50	132.50	132.50	132.50	132.50	132.50	132.50	132.50	132.50	132.50	132.50	132.50
1971	129.00	122.50	122.50	122.50	122.50	122.50	122.50	122.50	122.50	122.50	122.50	122.50	123.04
1972	122.50	122.50	122.50	122.50	122.50	122.50	128.00	132.50	132.50	132.50	132.50	132.50	127.13
1973	132.50	141.97	152.50	152.50	152.50	152.50	152.50	152.50	155.24	160.50	160.50	160.50	152.18
1974	162.68	172.50	172.50	172.50	174.55	195.00	195.00	195.00	195.00	195.00	195.00	195.00	184.98
1975	195.00	180.53	175.00	163.06	160.00	160.00	162.73	175.00	175.00	172.17	160.00	160.00	169.87
1976	160.00	160.00	160.00	160.00	160.00	163.54	175.60	182.50	182.50	182.50	167.00	167.00	168.39
1977	167.00	167.00	167.00	167.00	167.00	167.00	167.00	167.00	167.00	167.00	167.65	174.81	167.71
1978	186.55	206.58	217.07	220.00	220.00	227.73	237.89	241.74	250.23	253.18	284.00	300.00	237.08
1979	303.41	325.00	325.00	327.38	350.00	350.00	350.00	357.83	380.00	380.00	380.00	393.33	351.83
1980	420.00	420.00	420.00	420.00	420.00	420.00	420.00	425.24	475.00	475.00	475.00	475.00	436.77
1981	475.00	475.00	475.00	475.00									
1982													

Source: American Metal Market

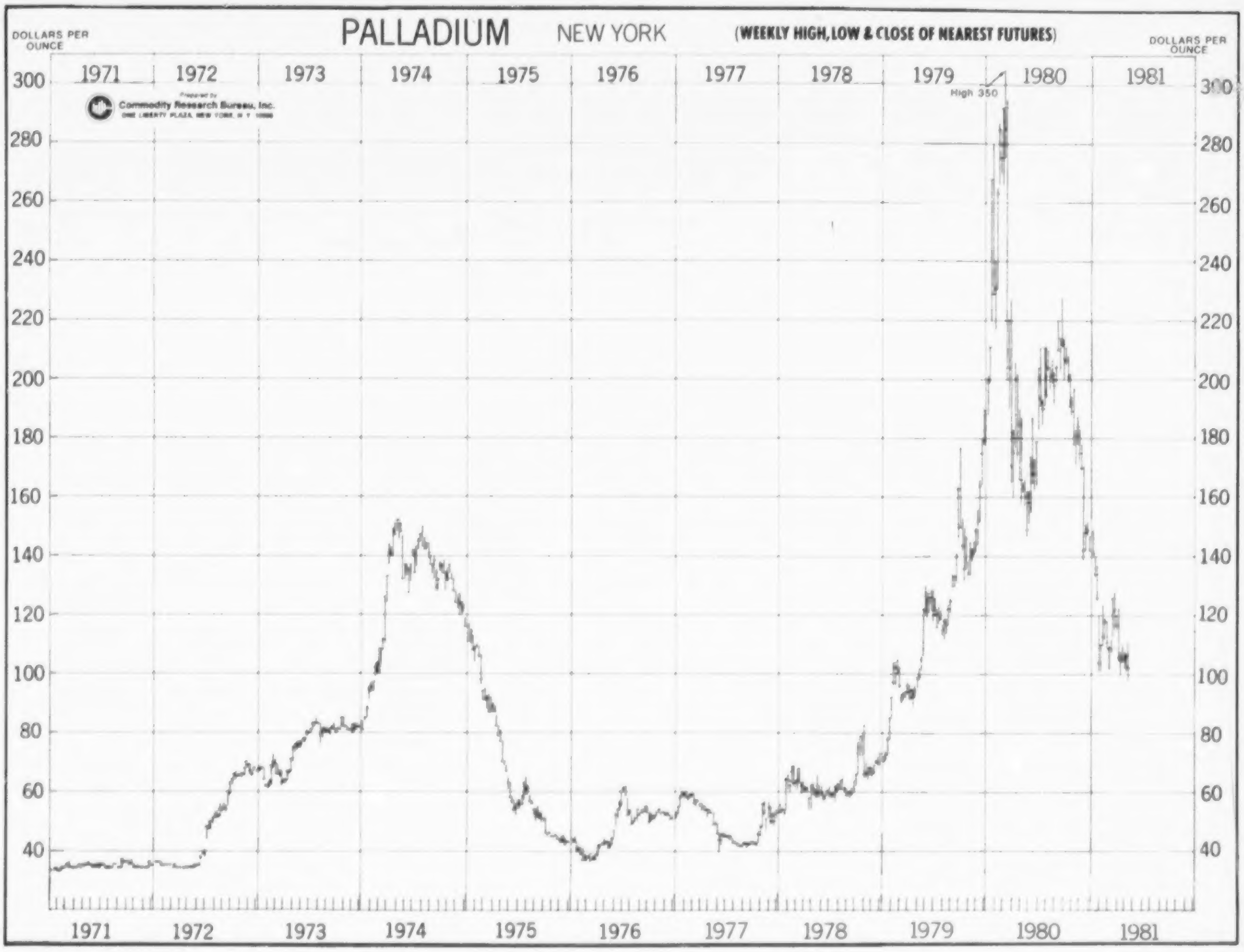


Platinum-Group Metals Sold to Consuming Industries in the United States In Thousands of Troy Ounces

Year	Automotive		Chemical		Electrical		Dental & Medical		Jewelry & Decorative		Petroleum		All Platinum-Group Metals			
	Platinum	Others[2]	Platinum	Others[2]	Platinum	Others[2]	Platinum	Others[2]	Platinum	Others[2]	Platinum	Others[2]	Platinum	Palladium	Other[2] Metals	Total
1968			157.7	248.8	117.3	343.2	24.9	63.0	40.2	31.5	161.1	23.4	496.2	721.5	66.2	1,283.9
1969			175.4	248.3	112.6	445.3	22.3	54.1	36.2	32.3	58.6	5.0	519.4	758.7	83.0	1,361.2
1970			148.3	231.4	103.3	442.9	18.3	49.2	29.2	27.5	202.0	15.7	509.0	739.3	82.8	1,331.2
1971			135.1	253.8	51.9	447.6	23.1	63.1	18.6	30.6	141.8	3.5	426.7	760.1	74.5	1,261.3
1972			225.9	363.5	92.4	443.5	30.5	95.5	20.7	29.3	98.8	31.4	545.3	876.0	140.9	1,562.2
1973			239.0	334.1	117.4	551.1	27.9	136.3	22.4	38.9	123.6	20.3	658.5	1,012.5	160.9	1,833.9
1974	350.0	15.0	350.0	150.0	98.6	452.6	25.5	125.7	23.0	35.3	139.5	26.7	943.7	886.1	151.2	1,981.0
1975	273.0	97.0	148.8	166.9	73.6	153.1	17.1	115.9	22.9	29.5	108.0	5.4	698.6	541.5	68.6	1,308.7
1976	481.0	194.9	83.6	154.7	89.3	197.5	26.9	140.4	23.4	14.8	59.1	7.7	851.1	657.1	94.9	1,603.1
1977	354.3	125.9	84.4	196.6	90.2	254.5	27.1	113.9	34.7	22.1	74.8	13.6	789.8	700.5	102.0	1,592.3
1978	597.5	201.8	149.7	186.5	106.4	346.5	44.1	208.0	25.8	25.1	108.4	19.2	1,196.3	917.9	145.4	2,259.6
1979[1]	803.2	248.3	98.6	264.9	115.8	457.4	27.1	244.9	27.7	21.6	170.0	27.9	1,408.9	1,132.6	214.5	2,756.0
1980[3]													1,096.7	814.4	163.5	2,074.6
1981																

[1] Preliminary. [2] Palladium, iridium, osmium, rhodium, & ruthenium. [3] Estimate. *Source: Bureau of Mines*

PLATINUM AND GROUP METALS



Salient Statistics of Platinum and Allied Metals in the U.S. In Troy Ounces

Year	Net Import Reliance as a % of Apparent Consumption	Production	Refinery		Stocks as of Dec. 31[1]				Imports for Consumption	Value of Imports Mil. $	Exports		
		Crude[5]	New Metal	Secondary Metal	Platinum	Palladium	Other	Total			Platinum	Other Groups[3]	Other[6]
1968		14,793	12,305	329,455	322,932	393,882	85,897	802,711	1,773,984	125.7	222,998	172,159	
1969		21,586	17,875	371,659	361,305	608,716	98,087	1,068,108	1,225,851	93.9	223,569	277,495	
1970		17,316	19,822	350,176	291,544	332,726	85,754	710,024	1,410,786	104.8	270,584	143,182	
1971		18,029	21,184	278,175	385,828	316,126	94,837	796,791	1,388,043	93.7	320,842	83,768	
1972		17,112	15,380	255,641	426,611	405,793	98,449	930,853	1,892,184	144.1	417,037	121,949	
1973		19,980	19,916	265,901	446,522	493,078	93,524	1,033,124	2,504,181	248.8	439,452	188,074	
1974		12,657	13,234	325,216	532,675	478,210	110,921	1,121,806	3,251,311	504.6	474,494	361,260	
1975	83	18,920	16,571	270,101	420,770	335,621	92,819	849,210	1,820,284	272.8	284,796	283,435	91,654
1976	90	6,116	7,101	215,355	536,318	459,765	89,620	1,085,703	2,667,059	291.5	138,951	186,602	186,854
1977	91	5,545	5,199	195,219	438,045	475,358	99,409	1,012,812	2,510,374	273.0	149,023	137,324	140,284
1978	90	8,246	8,303	257,191	369,823	369,937	121,651	861,411	2,921,411	450.2	166,095	356,990	179,462
1979[2]	89	7,300	8,868	309,022	305,605	323,865	131,812	761,282	3,479,128	840.5	207,832	502,548	189,218
1980[4]	87	6,000	6,000	345,000	493,000	293,831	114,198	901,029	3,505,942	1,178	250,000	330,000	170,000
1981													

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[1] In hands of refiners, importers, & dealers. [2] Preliminary. [3] Palladium, rhodium, iridium, osmium ruthenium, & osmium metals & alloys. [4] Estimate. [5] From crude platinum placers & byproduct platinum-group metals. [6] Ore & concentrates; waste, scrap & sweepings. *Source: Bureau of Mines*

High, Low & Closing Prices of April Platinum Futures in New York In Dollars per Ounce

Year of Delivery		Year Prior to Delivery											Delivery Year				Life of Delivery Range
		Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	
1978	High	178.4	180.3	175.0	169.7	163.2	160.3	158.3	160.8	176.3	179.2	190.0	224.8	239.5	247.2	226.0	247.2
	Low	171.0	169.0	166.2	159.6	152.5	154.5	148.5	152.8	156.4	162.3	174.3	186.6	211.6	212.0	208.9	148.5
	Low	177.5	174.3	168.0	162.7	159.4	156.4	153.4	159.0	174.4	176.5	189.2	219.0	230.3	225.8	210.0	—
	Close	255.0	263.0	241.5	263.5	261.3	277.4	284.3	292.5	390.0	371.6	358.0	393.0	430.5	413.2	398.0	430.5
1979	High	229.0	228.3	212.8	217.9	238.0	244.5	260.0	261.5	288.0	302.0	325.0	342.5	378.1	365.0	371.0	173.6
	Close	246.3	241.8	219.8	258.6	247.6	277.4	264.2	289.9	381.6	324.2	354.6	384.7	414.6	385.0	397.0	—
1980	High	438.0	421.5	409.5	458.3	446.0	429.0	434.0	573.6	608.6	550.0	715.3	974.4	960.0	1,045.0	642.0	1,045.0
	Low	388.5	370.0	369.0	402.0	410.0	382.0	368.0	417.0	468.5	467.0	537.0	715.0	827.0	465.0	525.0	270.1
	Close	423.2	390.1	409.5	451.0	426.9	388.8	428.0	573.6	485.5	546.0	692.6	832.0	920.1	560.0	602.0	—
1981	High	1,100.0	1,190.0	738.0	624.8	753.5	785.0	720.0	810.0	755.0	714.0	680.5	621.0	518.0	546.0	523.0	1,190.0
	Low	972.0	623.5	623.5	563.8	646.0	653.7	660.0	710.0	673.0	622.0	561.0	452.2	455.0	430.0	443.5	430.0
	Close	1,070.0	663.5	626.0	624.8	740.7	676.0	707.2	742.8	681.8	673.4	606.0	463.5	461.7	500.3	461.0	—
1982	High	595.0	624.7	594.5													
	Low	535.7	507.0	507.0													
	Close	540.2	577.1	529.9													

Source: N.Y. Mercantile Exchange

Month End Open Interest of Platinum Futures in New York In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1979	7,408	8,703	6,856	6,941	10,289	7,748	8,120	8,278	8,466	8,373	8,816	9,230
1979	8,755	9,866	9,302	9,088	8,861	9,683	10,865	9,850	8,563	7,525	7,595	8,926
1980	8,200	8,409	6,209	5,434	6,369	7,943	7,797	8,286	14,239	12,140	12,026	11,911
1981	9,410	8,946	9,441	7,709								

Source: N.Y. Mercantile Exchange

Volume of Trading of Platinum Futures in New York In Thousands of Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	28.3	35.9	48.9	27.2	38.5	33.9	26.0	34.5	28.1	39.0	33.1	32.5	405.7
1979	43.8	45.4	43.4	42.1	45.2	50.8	47.6	56.0	48.4	35.0	38.2	40.1	536.1
1980	35.2	28.5	41.7	21.4	26.6	37.6	40.8	26.7	59.7	41.0	34.8	35.9	429.7
1981	36.5	29.7	56.1	36.7									

Source: N.Y. Mercantile Exchange

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Pork Bellies

Domestic consumption of bacon (the end product after pork bellies have been cured and sliced), as measured by federally inspected bacon slicings, increased 4.1 percent in 1980. According to USDA statistics, total bacon slicings for the year were 1,675 million pounds, compared with 1,609 million in 1979.

U.S. cold storage stocks of frozen pork bellies on December 31, 1980 of nearly 97.4 million pounds were 39 percent larger than a year earlier, and the largest December 31 holdings on record.

The retail price of bacon, which averaged $1.35 per pound in January, 1980, dropped to $1.22 by June, and then rose to $1.70 per pound by December, up 26 percent from the December 1979 average price.

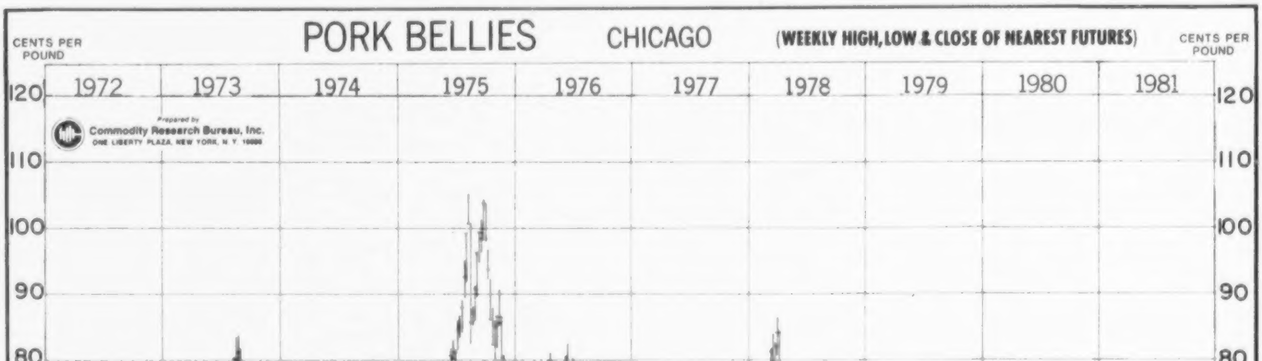
The December 1, 1980 U.S. market hog inventory was 4 percent below the year-earlier level, and pork production in the first quarter of 1981 was 1 percent less than during January–March 1980. Yet, U.S. cold storage holdings of pork bellies on March 31, 1981 were 22 percent larger than a year earlier.

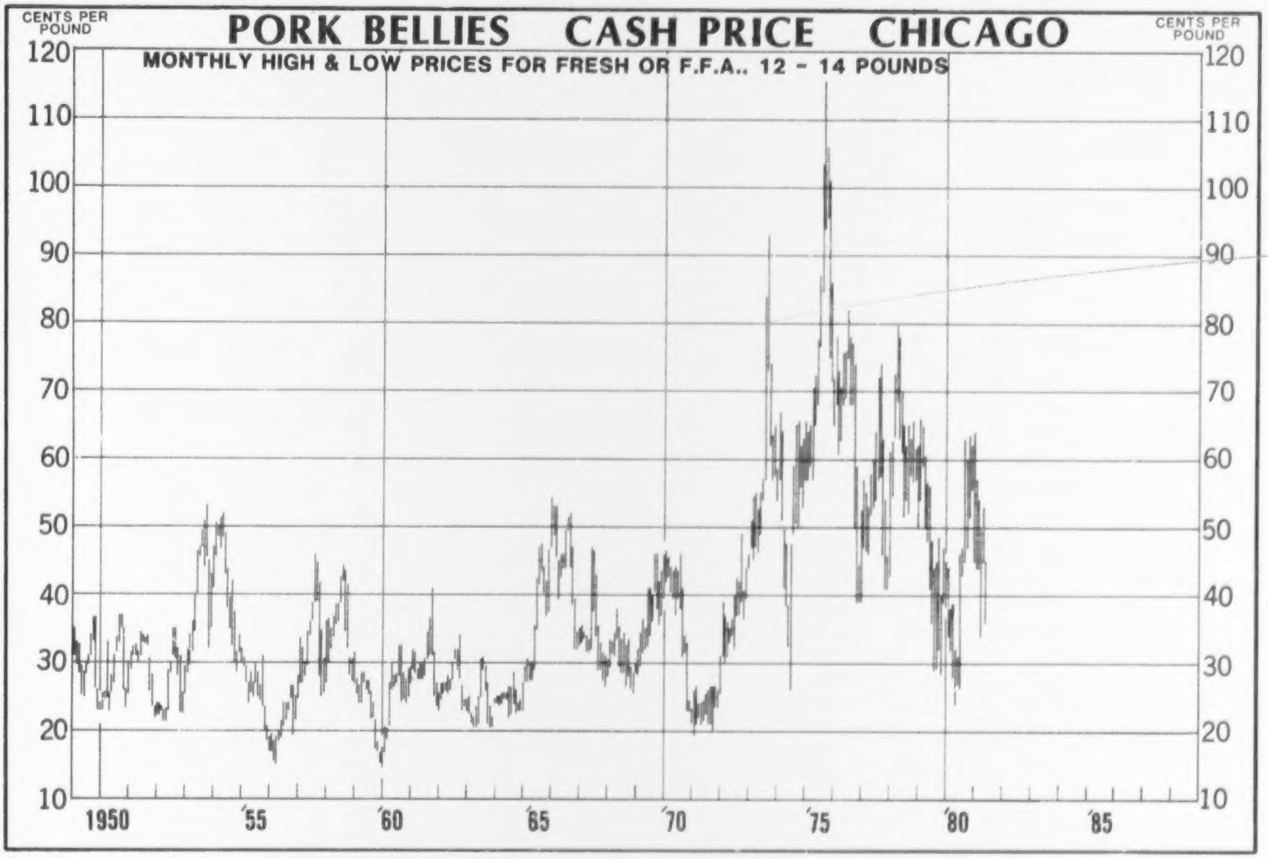
The USDA March Hogs & Pigs Report for the 14 states conducting quarterly hog surveys (which account for about 85 percent of the U.S. hog and pig inventory) showed that the inventory of hogs and pigs on farms March 1, 1981 was 9 percent smaller than the March 1, 1980 inventory. In addition, March–May 1981 farrowing intentions for the 14 states were 10 percent below farrowings in the comparable period of 1980. Thus the outlook for hog slaughter (and pork belly production) in the second half of 1981 was for a significant reduction from year-earlier levels.

Demand for bacon, and in turn for pork bellies, is considered to be fairly uniform. This is partly because it is used in small quantities with other foods, and its price tends to be less a factor in eating habits than the price of these other foods. Bacon has less nutritive value for its cost than most other foods and is seldom eaten by itself. Two major uses of bacon are as a breakfast food with eggs, and as a warm weather lunch in bacon, lettuce, and tomato sandwiches. Nevertheless, the consumption of bacon is influenced to some extent by any significant shifts in real spendable earnings. Also, consumption of bacon may have been influenced by adverse publicity concerning the preservative used in its preparation.

Futures Market

Pork belly futures are traded on the Chicago Mercantile Exchange.





PORK BELLIES CASH PRICE CHICAGO

MONTHLY HIGH & LOW PRICES FOR FRESH OR F.F.A.. 12 - 14 POUNDS

U.S. Frozen Pork Belly Storage Stocks (In Thousand Pounds, as of First of the Month)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1969	49,076	46,699	56,173	76,035	96,249	96,670	84,284	46,755	21,719	12,167	19,565	26,074
1970	38,697	37,017	47,094	61,068	74,004	82,061	67,250	39,300	20,393	9,823	21,043	42,054
1971	76,437	81,561	83,004	111,579	131,262	146,093	140,778	105,015	70,504	50,654	53,057	68,004
1972	86,065	84,092	88,090	107,013	131,189	133,069	105,727	69,933	35,792	16,691	22,175	34,167
1973	39,278	32,388	30,764	46,406	50,205	54,980	48,817	26,270	10,186	9,140	15,397	31,580
1974	48,758	48,499	53,083	65,237	78,707	87,290	70,470	39,621	21,762	12,850	22,274	38,441
1975	49,514	40,374	42,846	51,771	65,645	65,470	53,389	22,995	10,057	7,418	17,645	33,532
1976	44,722	37,386	38,526	51,176	60,144	63,799	49,258	25,773	8,689	5,858	9,708	24,946
1977	42,906	38,338	36,364	52,806	69,539	80,658	62,695	29,901	9,640	5,241	4,230	20,642
1978	23,747	19,013	15,738	39,631	70,976	82,343	75,027	44,787	21,015	7,482	20,013	40,964
1979	54,367	39,432	37,172	57,744	69,689	86,065	78,935	53,373	21,800	11,077	17,739	42,156
1980[1]	70,201	69,635	67,890	85,444	98,163	106,869	96,967	68,616	34,410	21,867	42,186	72,127
1981[1]	97,365	90,646	94,661	104,357								
1982												

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

PORK BELLIES

Weekly Federally Inspected Hog Slaughter

Week Ending	(In Thousand Head) 1981[1]	1980	1979	1978	1977
Jan. 3	1,297	1,378			
10	1,957	1,972	1,179	1,247	1,399
17	1,885	1,762	1,625	1,473	1,357
24	1,793	1,785	1,389	1,376	1,495
31	1,816	1,777	1,345	1,261	1,344
Feb. 7	1,773	1,770	1,383	1,527	1,388
14	1,731	1,760	1,381	1,437	1,520
21	1,672	1,642	1,488	1,551	1,470
28	1,698	1,765	1,367	1,348	1,379
Mar. 7	1,757	1,806	1,533	1,424	1,534
14	1,823	1,898	1,592	1,579	1,632
21	1,826	1,885	1,663	1,508	1,568
28	1,840	1,858	1,607	1,422	1,509
Apr. 4	1,848	1,858	1,646	1,452	1,518
11	1,914	1,736	1,644	1,508	1,502
18	1,823	1,919	1,669	1,608	1,488
25		2,028	1,609	1,504	1,576
May 2		2,028	1,710	1,588	1,522
9		1,918	1,759	1,498	1,527
16		1,973	1,677	1,522	1,439
23		1,916	1,598	1,377	1,336
30		1,891	1,592	1,329	1,283
June 6		1,582	1,390	1,138	1,112
13		1,851	1,647	1,377	1,383
20		1,747	1,631	1,283	1,298
27		1,683	1,398	1,297	1,253
July 4		1,669	1,600	1,266	1,164
11		1,269	1,269	1,054	949
18		1,573	1,630	1,378	1,232
25		1,600	1,590	1,376	1,214
Aug. 1		1,530	1,595	1,318	1,287
5		1,574	1,638	1,337	1,264
12		1,553	1,662	1,367	1,315
19		1,611	1,692	1,329	1,342
26		1,612	1,664	1,349	1,368
30		1,656	1,673	1,404	1,411
Sept. 6		1,497	1,509	1,251	1,270
13		1,867	1,776	1,579	1,568
20		1,812	1,764	1,581	1,590
27		1,707	1,772	1,497	1,547
Oct. 4		1,759	1,870	1,479	1,505
11		1,791	1,950	1,533	1,582
18		1,864	1,929	1,475	1,597
25		1,861	1,909	1,478	1,487
Nov. 1		1,890	1,935	1,527	1,685
8		1,955	2,016	1,549	1,603
15		1,810	1,790	1,651	1,655
22		2,022	1,548	1,328	1,308
29		1,514	1,981	1,642	1,623
Dec. 6		1,952	1,940	1,613	1,462
13		1,841	1,861	1,497	1,504
20		1,816	1,746	1,489	1,369
27		1,191	1,277	1,149	1,187

Weekly Pork Belly Storage Movement

& Stocks[1] in Thousands of Pounds									
1981[1] Week Ending	In	Out	On Hand	Net Movement	1980 Week Ending	In	Out	On Hand	Net Movement
Jan. 3	1,769	571	82,206	+1,198	Jan. 5	2,966	457	62,843	+ 2,509
10	1,466	1,870	81,802	− 404	12	1,813	833	63,823	+ 980
17	2,227	2,263	82,766	+ 474	19	2,490	778	65,535	+ 1,712
24	1,192	3,512	79,446	−2,320	26	1,062	2,307	64,290	− 1,245
31	1,092	4,404	76,134	−3,312	Feb. 2	284	2,605	61,969	− 2,321
Feb. 7	566	2,183	74,517	−1,617	9	393	1,218	61,144	− 825
14	1,009	1,106	74,799	− 97	16	1,638	857	60,036	+ 781
21	2,536	819	76,516	+1,717	23	737	1,263	59,510	− 526
28	3,756	829	79,443	+2,927	Mar. 1	2,190	842	60,858	+ 1,348
Mar. 7	3,201	235	82,409	+2,966	8	3,125	552	63,431	+ 2,573
14	3,047	235	85,221	+2,812	15	3,672	644	66,459	+ 3,028
21	2,973	383	87,811	+2,590	22	4,675	407	70,727	+ 4,268
28	2,465	565	89,711	+1,900	29	4,996	373	75,350	+ 4,623
Apr. 4	1,548	676	90,583	+ 872	Apr. 5	5,210	356	80,204	+ 4,854
11	4,335	391	94,527	+3,944	12	4,236	435	84,005	+ 3,801
18	5,779	298	100,008	+5,481	19	3,172	177	87,000	+ 2,995
25	5,759	466	105,301	+5,294	26	2,890	64	89,826	+ 2,826
May 2	5,722	475	110,548	+5,247	May 3	2,370	339	91,857	+ 2,031
9	6,131	237	116,442	+5,894	10	1,716	335	93,238	+ 1,381
16					17	2,757	530	95,465	+ 2,227
23					24	2,481	339	97,607	+ 2,142
30					31	1,771	296	99,082	+ 1,476
June 6					June 7	1,778	689	100,171	+ 1,089
13					14	1,171	1,242	100,100	− 71
20					21	359	2,269	98,190	− 1,910
27					28	90	6,188	92,092	− 6,098
July 4					July 5	13	6,027	86,078	− 6,014
11					12	37	6,606	79,429	− 6,649
18					19	339	6,846	72,922	− 6,507
25					26	91	5,435	67,578	− 5,344
Aug. 1					Aug. 2	60	6,254	61,384	− 6,194
5					9	39	6,703	54,720	− 6,664
12					16	55	6,674	48,101	− 6,619
19					23	39	10,904	37,236	−10,865
26					30	311	7,160	30,387	− 6,849
30					Sept. 6	441	5,480	25,348	− 5,039
Sept. 6					13	1,359	5,354	21,353	− 3,995
13					20	2,595	3,392	20,556	− 797
20					27	2,196	3,578	19,174	− 1,382
27					Oct. 4	2,656	1,517	20,313	+ 1,139
Oct. 4					11	2,852	923	22,242	+ 1,929
11					18	4,447	387	26,302	+ 4,060
18					25	4,153	250	30,195	+ 3,903
25					Nov. 1	4,413	77	34,531	+ 4,336
Nov. 1					8	5,255	38	39,748	+ 5,217
8					15	6,350	213	45,885	+ 6,137
15					22	6,847	74	52,658	+ 6,773
22					29	6,533	223	59,948	+ 6,310
29					Dec. 6	8,010	353	67,605	+ 7,657
Dec. 6					13	8,026	722	74,794	+ 7,304
13					20	4,271	559	78,506	+ 3,712
20					27	2,973	47	81,008	+ 2,926
27									

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[1] Total approved Chi. Merc. Exch. warehouses. [2] Preliminary. *Sources: U.S. Department of Agriculture; Chicago Mercantile Exchange*

High, Low & Closing Prices of May Pork Bellies Futures at Chicago In Cents per Pound

Year of Delivery		Year Prior to Delivery										Delivery Year					Life of Delivery Range
		Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	
1978	High	56.35	60.50	59.85	53.80	54.80	49.50	49.40	48.20	52.20	57.25	62.35	74.35	86.25	84.15	75.40	86.25
	Low	53.15	54.35	52.60	46.50	46.05	43.85	44.45	44.25	46.90	48.15	56.00	62.15	71.55	69.47	67.90	43.85
	Close	55.60	56.20	53.75	52.70	46.60	47.10	44.50	46.65	50.50	57.22	61.85	71.55	84.15	73.90	69.50	—
1979	High	72.50	69.30	68.75	65.20	60.00	62.70	68.00	72.02	68.40	68.70	63.70	70.95	67.30	63.60	63.50	72.50
	Low	63.10	65.00	62.25	50.30	51.65	54.70	56.10	62.80	62.60	55.00	55.80	62.50	54.60	50.85	47.95	47.95
	Close	69.50	65.00	64.25	53.50	60.00	57.47	67.70	65.27	66.70	56.27	63.45	65.25	55.35	63.27	49.35	—
1980	High	—	56.10	55.60	51.05	49.20	49.30	52.42	50.25	57.85	54.60	53.47	44.85	46.70	38.00	34.30	57.85
	Low	—	50.25	47.90	43.10	39.35	39.10	43.40	41.65	47.60	47.92	41.55	39.65	34.77	29.45	30.40	29.45
	Close	—	56.10	47.90	43.65	41.00	48.60	45.60	48.70	50.27	49.50	43.05	42.50	36.30	30.27	31.60	—
1981	High	58.50	52.60	49.75	54.50	61.60	66.25	73.30	75.15	75.15	77.05	59.60	63.00	55.30	61.35		
	Low	49.75	46.15	43.35	41.32	53.50	57.40	59.25	63.47	67.70	58.05	53.65	52.55	41.90	52.15		
	Close	51.10	48.40	43.45	53.90	59.30	59.50	68.47	71.20	75.15	58.05	57.70	52.55	55.05	52.15		
1982	High	69.15	75.50														
	Low	54.50	70.15														
	Close	69.15	70.15														

Source: Chicago Mercantile Exchange

Month End Open Interest of Pork Bellies Futures at Chicago In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	10,544	10,029	9,756	10,898	11,500	10,407	8,780	7,557	8,221	9,780	11,956	13,087
1979	10,597	10.592	9,337	10,586	14,069	23,174	25,400	22,840	22,062	21,805	25,585	27,981
1980	29,631	28,195	18,212	22,939	28,404	26,944	20,025	14,983	18,242	23,098	26,231	22,480
1981	15,687	12,471	12,821	16,714								
1982												

Source: Chicago Mercantile Exchange

Volume of Trading of Pork Bellies Futures at Chicago In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	137,389	132,101	150,884	134,178	166,433	126,865	113,817	92,169	83,650	109,911	100,223	92,022	1,439,651
1979	114,980	99,552	106,840	99,408	117,262	154,721	162,816	151,865	118,087	120,649	139,703	121,509	1,514,176
1980	191,920	206,539	189,881	183,876	165,844	206,669	198,256	169,404	167,355	220,435	178,821	176,622	2,250,945
1981	176,243	154,438	135,527	179,703									
1982													

Source: Chicago Mercantile Exchange

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Potatoes

(See special study on page 7)

The 1980 U.S. crop of potatoes was estimated by the USDA at 265 million cwt., down 11 percent from the 1979 crop and the smallest fall crop since 1973. The 1980 crop was harvested from 981,000 acres, 8 percent less than 1979. The average yield, at 270 cwt. per acre, was down 7 cwt. from 1979.

In the seven Eastern states, fall production, at 41.8 million cwt., was 14 percent less than 1979. Acreage was down 7 percent from the year earlier, and yields were 20 cwt. per acre less. Maine's production, which accounts for 60 percent of the region's total, was down 10 percent to 25 million cwt.

Fall production in the eight Central states totaled 54.6 million cwt., 12 percent less than a year earlier. Average yields were 193 cwt. per acre—down 19 cwt. from a year earlier—and harvested acreage was down 4 percent.

In the nine Western states, fall production was 168 million cwt., down 10 percent from 1979 and 19 percent from 1978. Yields per acre were up 6 cwt., but harvested acreage, 519,000 acres, was down 11 percent from the previous year. Idaho's crop was down 8 percent from 1979, while Washington and Oregon crops were down 9 and 22 percent, respectively.

As a result of smaller crops, U.S. average grower prices were record high. In March 1981, prices received by farmers for potatoes averaged $8.33 per cwt., two and a half times higher than a year earlier. Higher prices prevailed throughout the potato producing areas. In Maine, the March grower price averaged $7.65 per cwt., compared with $3.00 the previous year, while they averaged $6.85 in Idaho vs. $2.15 a year ago. Contracts signed in Idaho in 1981 call for $4.08 per cwt. of useable potatoes. This is an 18 percent increase over 1980.

Potato Stocks

April 1, 1981 U.S. stocks were sharply below a year earlier. Potato stocks in 15 major producing states totaled 68.3 million cwt., down 26 percent from a year ago. U.S. processor use of raw product in the 7 leading states totaled only 71.1 million cwt., 5 percent less than the comparable period last year, because of higher prices. Disappearance through April 1 totaled 186 million cwt., 4 percent below a year ago. Total disappearance to April 1, 1981, included 21.3 million cwt. of potatoes that were dumped during grading, fed to livestock on potato farms, discarded without grading, and lost to shrinkage (moisture loss). Disappearance during March 1981 totaled 25.9 million cwt., compared with 29.2 million cwt. a year ago.

In the three Eastern states (excluding Long Island, New York) estimated stocks totaled 8.33 million cwt., down 39 percent from a year ago. Maine's stocks, at 7.20 million cwt., were down 40 percent from last year's high. In the Central states, (excluding Ohio) stocks were estimated at 7.83 million cwt., down 42 percent from 1980. In the six Western states stocks were 19 percent smaller than a year ago.

Smaller supplies and good movement reduced the stocks of frozen potato products. On April 1, 1981, 780 million pounds of frozen potatoes were in cold storage, 14 percent less than a year ago. Holdings of frozen potatoes were largest in the West, where the bulk of the processing takes place; the Pacific and Mountain states accounted for more than two-thirds of the total frozen potato stocks. Maine's stocks of frozen potatoes were 6 percent of the U.S. total.

The dehydrated potato market in early 1981 was firm. The Potato Growers of Idaho report that dehydrators in Idaho were manufacturing and moving products at a brisk pace. Part of the reason for this was decreased capacity in the industry, because many facilities were closed and dismantled after the introduction of reconstituted potato-chips. Another reason was the relatively strong export markets, particularly to Japan and the Pacific Rim countries.

In addition to strong demand in the commercial market, on March 30, 1981, the USDA announced the purchase of 55,000 12/1-pound cases of dehydrated potato flakes for distribution through domestic feeding programs during July 1–Sept. 30. The f.o.b. price was $7.99 a case. Through early 1981, USDA had purchased 65,000 12/1-pound cases of dehydrated potatoes.

The April 1981 USDA forecast of the 1981 spring

Salient Statistics of Potatoes in the United States

	Acreage		Yield	Farm Disposition					Value of		Stocks	Foreign Trade[5]		
				Used Where Grown										
Year	Planted	Harvested	Per Harv. Acre Cwt.	[3] Seed	Shrinkage & Loss	Household Use	Sold [3]	Farm Price $ Cwt.	Prod.[6]	Sales	on Jan. 1[4] 1,000 Cwt.	Dom. Exports	Imports	Consump. Per Capita[7] in Lbs.
	1,000 Acres			Million Cwt.					Million $			1,000 Cwt.		
1970	1,450	1,421	229	10.0	23.9	1.4	291.9	2.21	714	644	138,140	2,928	1,230	117.5
1971	1,432	1,391	230	8.9	27.9	[2]	282.5	1.90	603		147,550	3,241	1,098	118.7
1972	1,301	1,256	236	7.9	20.0	[2]	268.5	3.02	896	808	148,600	4,430	759	119.4
1973	1,330	1,307	230	6.5	18.4	[2]	275.1	4.90	1,472	1,343	132,500	4,975	1,874	116.8
1974	1,422	1,392	246	6.5	32.5	[2]	303.4	4.01	1,355	1,215	131,600	4,545	1,453	114.3
1975	1,304	1,260	256	6.6	22.2	[2]	293.5	4.48	1,445	1,305	160,100	9,317	691	122.1
1976	1,407	1,371	261	6.8	26.2	[2]	324.7	3.59	1,283	1,167	156,220	11,617	806	116.1
1977	1,398	1,360	261	6.8	31.0	[2]	316.8	3.55	1,254	1,126	172,230	3,630	980	121.7
1978[1]	1,401	1,375	267	6.3	34.3	[2]	324.6	3.38	1,222	1,097	175,300	3,025	617	121.1
1979[1]	1,310	1,270	270	6.0	30.2	[2]	306.8	3.43	1,174	1,053	193,520			118.3
1980[1]	1,183	1,155	261								176,020			116.0
1981[1]	1,200										143,960			

Note: 60 pounds equals one bushel. [1] Preliminary. Included in "seed." [2] Also feed. [3] For all purposes, including food, seed processing livestock feed. [4] Merchantable stocks held by growers & local dealers. [5] Year beginning July. [6] Farm weight basis. Excludes canned & frozen potatoes. [7] Fresh & processed. *Source: Economic Research Service, U.S.D.A.*

potato crop estimated production at 21.1 million cwt. up 23 percent from last year's low, but still 1 percent below 1979. In 1981, growers reduced spring acreage intended for harvest to 78,400 acres, 8 percent above the 1980 record low but still the second smallest spring harvested acreage on record. Prospective yields, at 269 cwt. an acre, were 14 cwt. an acre more than the record high set in 1979 and 34 cwt. above the 1980 yield.

Total supplies of table-stock potatoes in early 1981 were smaller than they had been for years, and even with a larger spring 1981 crop, potato prices were expected to probably remain high. In late summer, 1981 prices were expected to depend on the summer and fall crop prospects.

Futures Markets

Round white potato futures are traded on the New York Mercantile Exchange. Russet futures are traded on the Chicago Mercantile Exchange.

World Production of Potatoes In Thousands of Metric Tons[2]

Yr. of Harvest	Austria	Canada	Czechoslovakia	France	E. Germany	W. Germany	Italy	Japan	Netherlands	Poland	Spain	United Kingdom	U.S.S.R.	United States	World Total
1970	2,704		4,793	8,868	13,054	16,250	3,668	3,611	5,648	50,301	5,419	7,482	96,783	14,776	258,707
1971	2,717	2,214	4,621	9,400	9,512	15,176	3,268	3,271	5,749	39,801	5,865	7,396	92,658	14,485	251,220
1972	2,341	1,991	5,058	7,796	12,140	15,038	2,949	3,533	5,581	48,735	5,275	6,527	78,329	13,443	241,174
1973	2,120	2,158	5,087	7,459	11,401	13,677	2,889	3,413	5,771	51,900	5,579	6,808	108,201	13,608	271,630
1974	1,996	2,501	4,522	7,473	13,404	14,549	2,849	2,942	6,095	48,519	5,693	6,791	81,022	15,531	249,673
1975	1,579	2,111	3,565	6,865	7,673	10,853	2,900	3,261	4,743	46,429	5,338	4,551	88,703	14,617	236,123
1976	1,746	2,345	4,214	4,326	6,816	9,808	2,937	3,742	4,783	49,951	5,659	4,789	85,102	16,224	240,144
1977	1,352	2,488	3,760	7,803	10,313	11,368	3,080	3,520	5,752	41,148	5,881	6,624	83,652	16,083	242,977
1978	1,401	2,496	3,863	7,467	10,100	10,510	2,801	3,316	6,231	46,648	5,316	7,330	86,100	16,568	250,568
1979[1]	1,494	2,760	4,000	7,139	12,540	8,746	2,957	3,381	5,937	49,600	5,400	6,485	91,000	15,800	258,640
1980[2]	1,365	2,523	3,100	7,213	9,200	6,694	2,800	3,364	6,080	26,000	6,071	6,876	75,000	13,653	211,477

[1] Preliminary. [2] Estimate. *Source: Foreign Agricultural Service, U.S.D.A.*

United States Potato Production by Seasonal Groups In Millions of Hundredweight (CWT.)

		Spring			Summer		Fall								
Year	Winter	Florida	Calif.	Total Spring	VA.	Total	Maine	Wisc.	Minn.	N.D.	Wash.	Idaho	Oregon	Total Fall	Total U.S.
1970	3.6	4.3	14.5	25.9	4.0	28.4	35.7	13.0	11.4	17.8	33.6	74.7	15.2	267.8	325.7
1971	3.1	3.3	13.4	23.7	4.3	25.9	37.7	13.2	14.9	20.0	30.1	77.3	13.7	266.7	319.3
1972	2.3	3.2	11.1	21.0	4.1	23.7	33.3	11.5	13.3	17.4	31.4	77.3	14.4	249.3	296.4
1973	2.9	3.7	11.3	21.3	3.3	21.5	28.8	11.5	13.1	19.1	35.3	79.0	15.9	254.4	300.0
1974	2.9	3.8	13.7	25.0	4.1	25.1	36.4	14.0	15.3	23.0	41.2	81.2	17.5	289.3	342.4
1975	2.9	3.5	10.5	20.0	2.4	21.0	26.8	14.9	9.7	17.6	48.3	78.5	24.4	278.4	322.0
1976	3.0	4.5	13.5	24.7	3.5	22.5	27.4	15.4	11.1	16.9	55.8	88.5	28.9	307.4	357.7
1977	2.7	4.6	11.9	22.9	3.5	22.0	28.3	18.0	13.0	21.6	50.6	88.2	25.6	307.1	355.3
1978	2.6	3.7	8.3	18.0	2.7	20.9	26.0	17.3	14.9	23.6	50.5	100.3	28.5	324.9	366.3
1979	2.4	4.4	11.1	21.3	2.6	21.8	27.7	17.0	12.9	18.2	48.5	85.1	25.3	296.9	342.5
1980[1]	2.4	3.6	8.8	17.1	1.5	17.0	25.0	16.0	9.9	15.7	43.9	78.5	19.7	264.6	301.0
1981[1]	2.5	5.2	10.6	21.1											

[1] Preliminary, December estimate. *Source: U.S.D.A.—Crop Reporting Board*

Potato Crop Production Estimates, Stocks & Disappearance in the U.S. In Millions of Cwt.

	Crop Production Estimates						Total Storage Stocks[2]					Disappearance of Previous Fall Crop Until				
	Total Crop			Fall Crop				Following Year					Following Year			
Year	Oct. 1	Nov. 1	Dec.	Oct. 1	Nov. 1	Dec.	Dec. 1	Jan. 1	Feb. 1	Mar. 1	Apr. 1	Dec. 1	Jan. 1	Feb. 1	Mar. 1	Apr. 1
1969	305.4	305.1	307.2				162.8	138.1	111.5	87.6		76.0	100.5	127.3	151.1	
1970	320.2	323.5	324.9				171.6	147.6	120.7	95.9		78.4	103.1	131.3	156.7	
1971	317.0	318.5	316.1				172.6	148.6	122.4	97.2		77.5	102.4	129.4	168.2	
1972	296.0	294.5	294.5				155.2	132.1	105.7	82.5	57.9	90.4	114.5	141.7	165.5	198.0
1973	297.5	298.6	297.4				154.9	131.6	105.4	80.5	55.5	96.1	120.3	147.3	172.7	209.6
1974	337.8	339.0	340.1	286.6	287.9	287.7	183.9	160.1	131.5	103.0	75.2	97.8	122.6	152.2	181.4	200.6
1975	307.6	310.3	315.6				181.7	156.2	129.7	102.9	71.0	88.6	114.9	142.9	169.4	201.4
1976	349.9	349.3	353.4	299.8	299.2	302.8	198.6	172.2	142.0	112.8	81.1	99.1	128.3	157.8	188.0	218.4
1977	350.6	350.4	352.0	303.6	303.4	304.4	202.6	175.3	147.9	119.9	88.7	93.8	122.8	149.9	177.9	210.2
1978[1]	353.6	357.7	360.5	312.0	316.0	318.7	219.9	193.5	163.0	132.6	99.3	94.6	122.0	153.0	185.0	218.0
1979[1]	347.9	348.3	347.6	300.3	300.7	301.6	200.8	176.0	147.9	121.7	92.6	87.5	114.0	143.0	170.0	200.0
1980[1]	296.9	296.9	301.0	260.7	260.7	264.6	169.8	144.0	118.5	94.2		84.1	110.0	135.0	160.0	

[1] Preliminary. [2] Held by growers & local dealers in the fall producing areas. *Source: Crop Reporting Board, U.S.D.A.*

POTATOES

Wholesale Price of Potatoes at New York   In Dollars Per Cwt.

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
WHITE, WESTERN, NEW YORK[1]													
1974	11.500	14.000	15.000	16.000	20.000	13.250	12.000	11.000	10.625	11.000	10.750	10.250	12.948
1975	9.925	9.750	8.500	8.750	11.750	11.750	13.750	14.500	12.000	12.750	12.250	12.000	11.473
1976	11.850	12.250	12.250	12.750	12.500	12.000	10.875	9.500	N.A.	N.A.	10.000	10.250	11.423
1977	10.250	11.500	11.000	11.500	11.500	13.750	10.500	16.500	N.A.	11.000	12.250	11.000	11.886
1978	N.A.	N.A.	N.A.	N.A.	12.500	14.416	17.916	16.834	15.000	14.626	12.500	12.250	14.505
1979	12.750	17.376	16.250	11.750	12.000	13.084	7.500	6.313	6.250	6.875	6.875	9.063	10.507
1980	8.500	7.438	8.625	8.188	8.188	7.583	10.833	10.250	11.000	11.000	11.000	9.750	9.363
1981	12.375	11.875											
WHITE, EASTERN, NEW YORK[2]													
1973	6.383	6.200	8.567	8.875	10.125	11.375	11.000	8.292	6.292	7.188	7.750	7.250	8.275
1974	10.417	11.250	12.500	14.917	16.083	11.750	9.750	6.692	6.688	5.025	4.670	4.700	9.537
1975	4.333	5.875	5.125	5.333	7.438	7.750	13.417	8.000	8.538	8.000	7.000	6.325	7.261
1976	8.375	10.375	8.375	11.467	11.583	8.500	8.063	6.250	5.000	5.250	5.500	5.683	7.868
1977	7.125	9.917	9.383	12.375	13.375	11.313	7.875	5.250	5.200	5.500	5.550	5.175	8.170
1978	5.250	7.917	6.475	8.150	10.000	9.917	10.500	6.500	5.000	5.500	5.500	5.133	7.154
1979	5.867	5.967	8.083	9.413	9.000	8.125	7.333	5.750	5.333	5.625	5.617	5.250	6.780
1980	6.000	8.500	8.717	7.750	10.000	7.000	10.500	11.000	9.625	10.625	11.125	10.875	9.310
1981	13.000	13.625											

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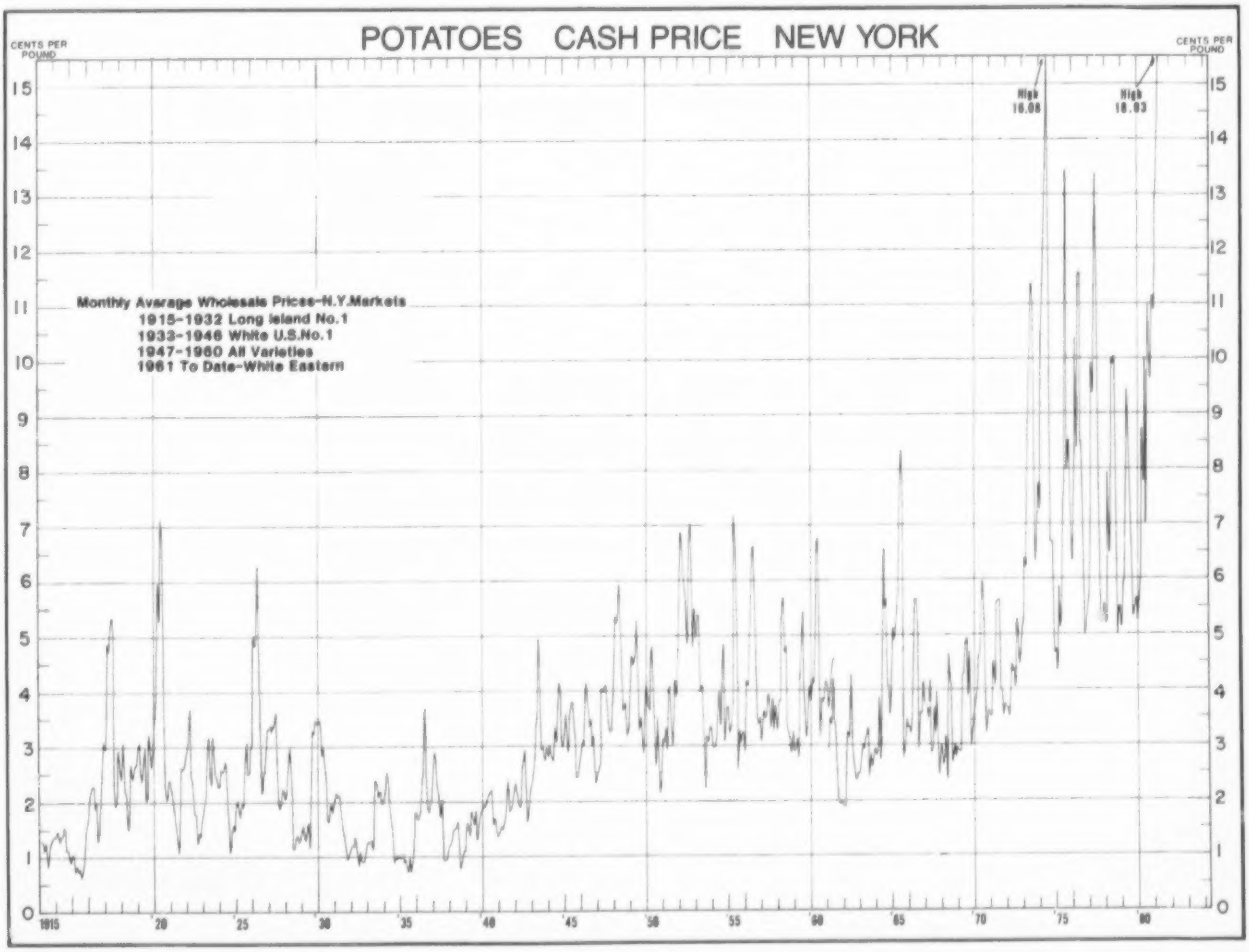
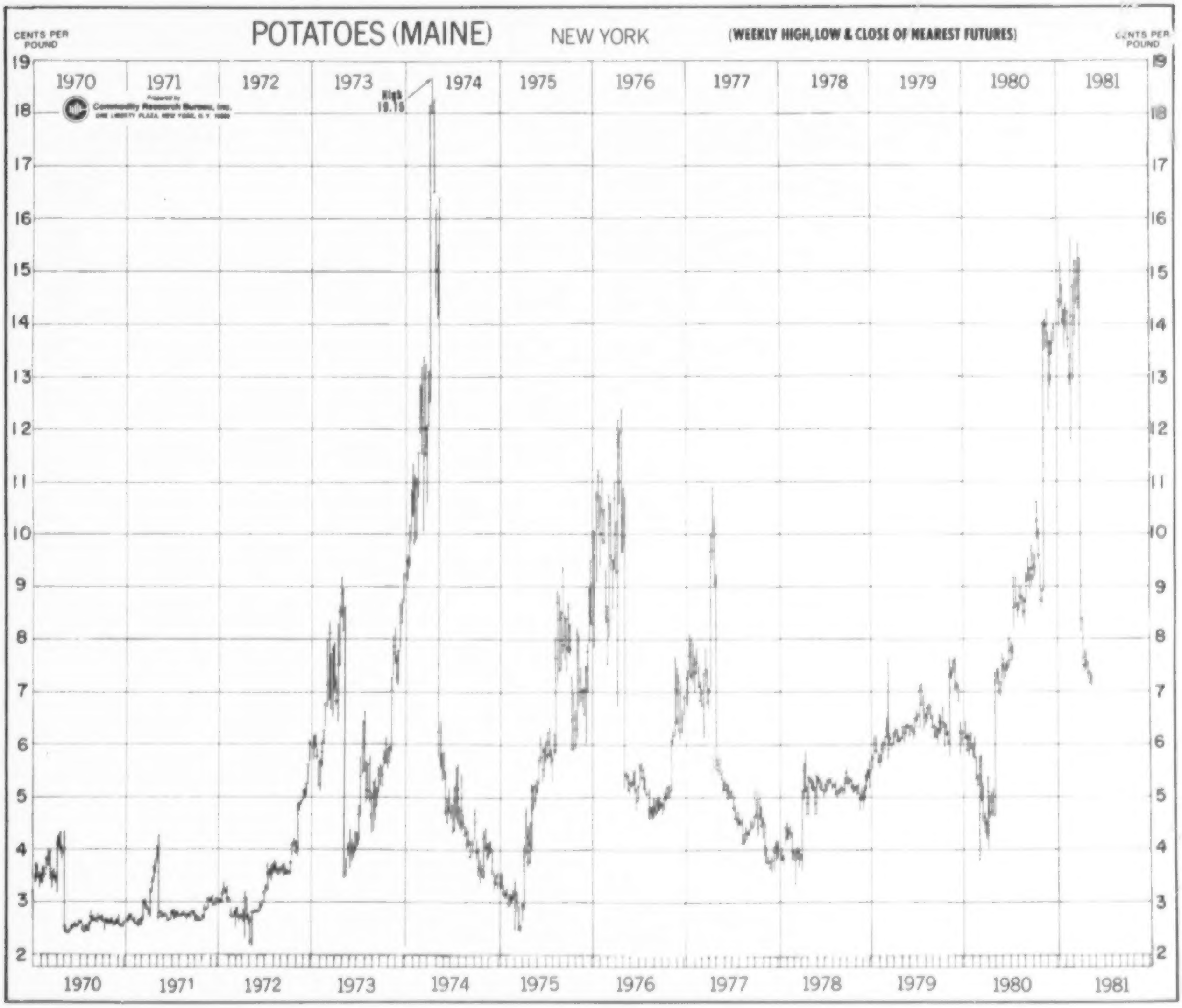
[1] All varieties and types of Irish old and new stock. U.S. No. 1A, Western origin, N.Y. Market (0113–0444.01). [2] Same. Eastern Origin. (0113-0443). *Source: Bureau of Labor Statistics*


POTATOES   CASH PRICE   NEW YORK



High, Low & Closing Prices of April[1] Potato Futures at New York In Cents per Pound

Year of Delivery		Year Prior to Delivery										Delivery Year			Life of Delivery Range
		Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.[1]	
1978	High	—	7.80	7.88	7.86	7.20	6.40	5.90	5.70	6.40	5.05	4.61	4.90	4.87	4.09	7.88
	Low	—	7.18	7.35	6.75	6.08	5.67	5.02	5.25	4.80	4.02	3.95	4.02	3.78	3.64	3.64
	Close	—	7.18	7.88	7.22	6.28	5.90	5.35	5.64	4.91	4.08	4.27	4.77	3.85	4.00	—
1979	High	6.70	7.03	7.19	6.90	6.64	6.45	6.90	6.65	6.32	5.88	5.92	6.45	6.50	7.60	7.60
	Low	6.55	6.60	6.52	6.26	6.34	5.95	6.04	6.12	5.17	5.14	5.30	5.83	5.94	6.30	5.14
	Close	6.60	7.03	6.75	6.47	6.40	6.20	6.59	6.23	5.75	5.64	5.85	6.04	6.45	7.60[2]	—
1980	High	—	—	—	—	—	11.74	11.00	10.74	10.76	9.33	8.24	7.05	6.40	5.80	11.74
	Low	—	—	—	—	—	9.70	10.30	8.65	8.70	8.10	6.80	6.01	5.36	4.01	4.01
	Close	—	—	—	—	—	10.40	10.75	9.72	9.08	8.19	6.85	6.07	5.36	4.05	—
1981	High	—	—	—	10.10	12.22	15.62	15.47	16.06	16.70	16.74	16.98	17.75	17.40	15.51	17.75
	Low	—	—	—	8.25	9.70	11.42	13.55	14.66	14.58	14.75	14.85	15.85	13.90	12.93	8.25
	Close	—	—	—	9.96	11.91	13.73	14.72	15.38	14.77	16.58	16.73	16.79	14.14	14.44	—
1982	High	—	11.87	11.49												
	Low	—	11.05	9.70												
	Close	—	11.14	9.85												

[1] Contract expires the last business day of the previous month. [2] Liquidated March 8, 1979. *Source: N.Y. Mercantile Exch.*

POTATOES

U.S. Cold Storage Stocks of All Frozen Potatoes—(First of Month) In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1973	677.3	666.2	734.5	755.3	746.6	671.6	509.9	316.7	246.7	311.8	427.7	496.8
1974	549.3	649.6	704.9	732.6	741.0	650.7	544.0	360.3	363.0	462.7	602.4	688.4
1975	693.5	723.0	797.8	814.4	906.7	945.1	881.1	661.1	536.1	548.9	651.6	689.1
1976	683.2	689.9	744.9	787.6	791.8	794.8	756.6	606.1	508.8	562.4	666.8	745.2
1977	750.4	777.2	809.1	870.8	893.3	903.0	886.5	720.5	576.4	611.0	726.7	805.0
1978	829.8	857.8	901.2	923.7	944.4	971.6	954.8	772.6	627.2	644.9	738.4	769.8
1979	777.5	778.7	784.5	818.2	849.3	930.4	971.7	866.0	671.3	647.1	761.0	814.3
1980[1]	812.2	835.1	868.2	906.6	911.7	958.1	963.4	810.3	598.5	626.6	753.1	813.4
1981[1]	728.9	707.3	757.8	780.6								

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

U.S. Average Price Received by Farmers for Potatoes In Dollars Per CWT.

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Avg.[1]
1972	1.84	1.81	1.83	1.80	1.99	2.37	3.68	3.08	2.41	2.13	2.55	2.76	3.01
1973	3.16	3.30	3.82	4.11	4.79	6.15	7.45	4.76	3.24	2.68	3.64	3.95	4.89
1974	4.88	6.23	7.08	7.96	8.11	6.43	5.59	4.78	4.05	4.09	3.88	3.51	4.01
1975	3.36	3.15	2.79	3.23	3.56	5.33	6.58	5.06	4.04	3.63	3.84	3.92	4.48
1976	4.61	4.64	4.95	5.22	5.10	4.44	4.35	3.86	3.20	3.17	3.04	3.10	3.59
1977	3.44	3.52	3.59	3.94	4.42	4.57	5.27	4.01	3.29	3.11	3.08	3.10	3.55
1978	3.24	3.20	3.25	3.30	3.84	5.32	6.71	4.92	3.49	3.07	3.08	3.07	3.38
1979	3.09	2.77	2.94	2.81	3.14	3.08	3.53	3.76	3.20	3.15	3.34	3.40	3.43
1980[2]	3.44	3.37	3.23	3.21	3.74	4.36	5.91	7.64	6.42	4.38	5.42	6.19	5.73
1981[2]	7.39	7.88	8.33	8.53									

[1] Annual weighted average by sales. [2] Preliminary. *Source: Statistical Reporting Service, U.S.D.A.*

Utilization of Potatoes in the United States In Millions of Cwt.

	Sales												Used on Farms Where Grown	
		For Processing							Other Sales					
Crop Year	Table Stock	Chips, Shoe-strings	For dehy-dration	Frozen French Fries	Other Frozen Pdt's	Canned Po-tatoes	Other Canned Pdt's[2]	Starch & Flour	Live-stock Feed	Seed	Total Sales		Total
1972	111.7	34.6	27.5	56.1	7.9	2.1	2.2	3.4	5.0	18.0	268.5	27.9	296.4
1973	107.6	34.5	31.4	60.3	9.6	2.7	2.5	2.7	3.7	20.1	275.1	25.0	300.0
1974	125.6	32.8	34.7	69.2	9.2	2.6	2.1	3.7	4.2	19.4	303.4	39.0	342.4
1975	114.4	34.1	33.8	70.6	9.3	1.9	2.1	2.2	4.3	20.7	293.5	28.8	322.3
1976	123.1	34.6	40.4	79.7	12.9	1.9	2.6	2.8	6.3	20.5	324.7	33.0	357.7
1977	116.6	36.9	32.8	79.9	14.6	2.8	2.5	2.4	7.4	21.0	316.8	37.8	354.6
1978	111.1	37.8	33.2	79.5	15.4	2.7	2.1	3.5	7.2	20.0	324.6[4]	40.6	365.2
1979[1]	115.1	38.3	26.9	78.1	14.4	2.7	2.1	3.6	7.0	18.1	306.8	36.2	343.0
1980[3]	107.5	36.0						2.0		20.0			

[1] Preliminary. [2] Hash, stews, soups. [3] Estimate. [4] Includes 12.0 sold for livestock feed & starch under the U.S.D.A. diversion program. *Source: Crop Reporting Board, U.S.D.A.*

Month End Open Interest of Potato Futures at New York In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	20,254	13,758	15,412	5,389	8,493	9,413	10,390	11,529	12,644	12,977	11,759	11,617
1979	12,083	13,789	863	1,030	1,655	2,336	3,786	4,516	4,323	4,898	5,307	3,993
1980	4,093	4,078	3,033	1,214	3,009	7,152	12,165	15,352	18,807	17,487	16,624	11,325
1981	11,722	7,489	1,106	2,214								

Source: N.Y. Mercantile Exchange

Volume of Trading in Maine Potato Futures, on N.Y. Mercantile Exchange In Contracts (50,000 Lbs. Per)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	55,269	44,671	45,075	53,844	12,859	18,487	19,670	41,255	36,754	48,503	38,099	38,643	453,129
1979	45,986	36,632	22,321	842	1,972	3,571	10,793	8,931	12,750	15,964	12,939	11,519	184,220
1980	13,849	12,656	14,443	9,650	5,853	20,483	47,611	52,794	60,988	62,081	48,084	45,267	293,759
1981	46,231	47,793	37,909	4,585									

Source: New York Mercantile Exch.

Rapeseed

In early 1981, the Foreign Agricultural Service (FAS) of the USDA projected 1980/81 world production of rapeseed at 11.1 million tonnes, approximately 10 percent above 1979/80 production and about 30 percent above the 1975/76–1978/79 average production. The FAS projection assumed harvesting of the 3.6 million hectare crop in India and the 2.8 million hectare crop in China in Spring of 1981. Indian production was projected at 2.0 million tonnes, and Chinese production at 2.4 million. Relatively large French production and the projected large Indian production were expected to offset a projected decline in Canadian production, from 3.4 million tonnes in 1979/80 to 2.5 million in 1980/81. Use of high-yielding low erucic acid varieties and EEC policies combined to stimulate the rapid increase in French production, from 0.5 million tonnes in 1979/80 to 1.1 million in 1980/81.

Throughout the Seventies, and into the Eighties, plant breeders in Canada and Europe systematically manipulated the genetic structure of rapeseed to minimize or eliminate erucic acid from the oil and glucosinolates (sulfur compounds) from the meal. The improved oil and meal are gaining acceptance as general purpose edible vegetable oil and protein feedstuffs. Most European production is from fall-seeded *Brassica campestris L.* (turnip rape) which outyields the spring rape varieties of *Brassica napus L.* Both genera are commingled in commerce and, in Canada, are grown as spring-sown rapeseed. Canada is the world's leader in production of rapeseed as well as having the largest exportable supplies.

Futures Market

Rapeseed futures are traded on the Winnipeg Commodity Exchange.

World Production of Rapeseed (In Thousands of Metric Tons)

Year[2]	Canada	China	Czechoslovakia	Denmark	France	E. Germany	W. Germany	India	Japan	Bangladesh	Pakistan	Poland	Sweden	Chile	World Total
1969	440	688.0	48.0	21.1	514.0	163.8	158.1	1,347	48.0	126.0	246.0	204.0	208.0	63.6	4,751
1970	758	780.0	63.0	22.2	582.0	181.0	185.0	1,564	30.1	136.0	265.0	566.0	191.0	69.9	6,461
1971	1,638	830.0	100.6	51.0	668.0	197.0	228.2	1,975	22.8	112.1	269.0	595.0	254.0	82.0	7,815
1972	2,155	1,000	107.0	51	722.0	234.0	248.7	1,433	15.9	106.0	301.0	430.0	327.0	77.9	6,624
1973	1,300	1,050	117.0	92	661.0	246.0	242	1,808	13.0	98	287.0	512.0	339	35.0	7,001
1974	1,207	1,075	85	112	690	280	301	1,692	9	107	293	523	351	33	7,022
1975[1]	1,163	1,090	115	115	532	250	194	2,300	7	110	305	726	327	55	7,989
1976[1]	1,749			90	561							980	279		
1977[3]	1,940	1,380		110	440			1,650			240	650	256		8,060
1978[3]	3,497	1,868	166	91	568	301	322	1,860	5	137	243	691	330	65	10,703
1979[3]	3,414	2,402	81	148	510	195	362	1,433	5	140	300	233	297	73	10,180
1980[3]	2,509	2,350	180	150	1,140	256	380	2,000	5	140	300	564	373	75	11,097

[1] Preliminary. [2] Harvest generally occurs in the first half of the calendar year given in all major producing countries except Canada. [3] Estimate. *Source: Foreign Agricultural Service, U.S.D.A.*

Wholesale Price of Rapeseed Oil, Refined (Denatured), in Tanks at N.Y. In Cents Per Pound

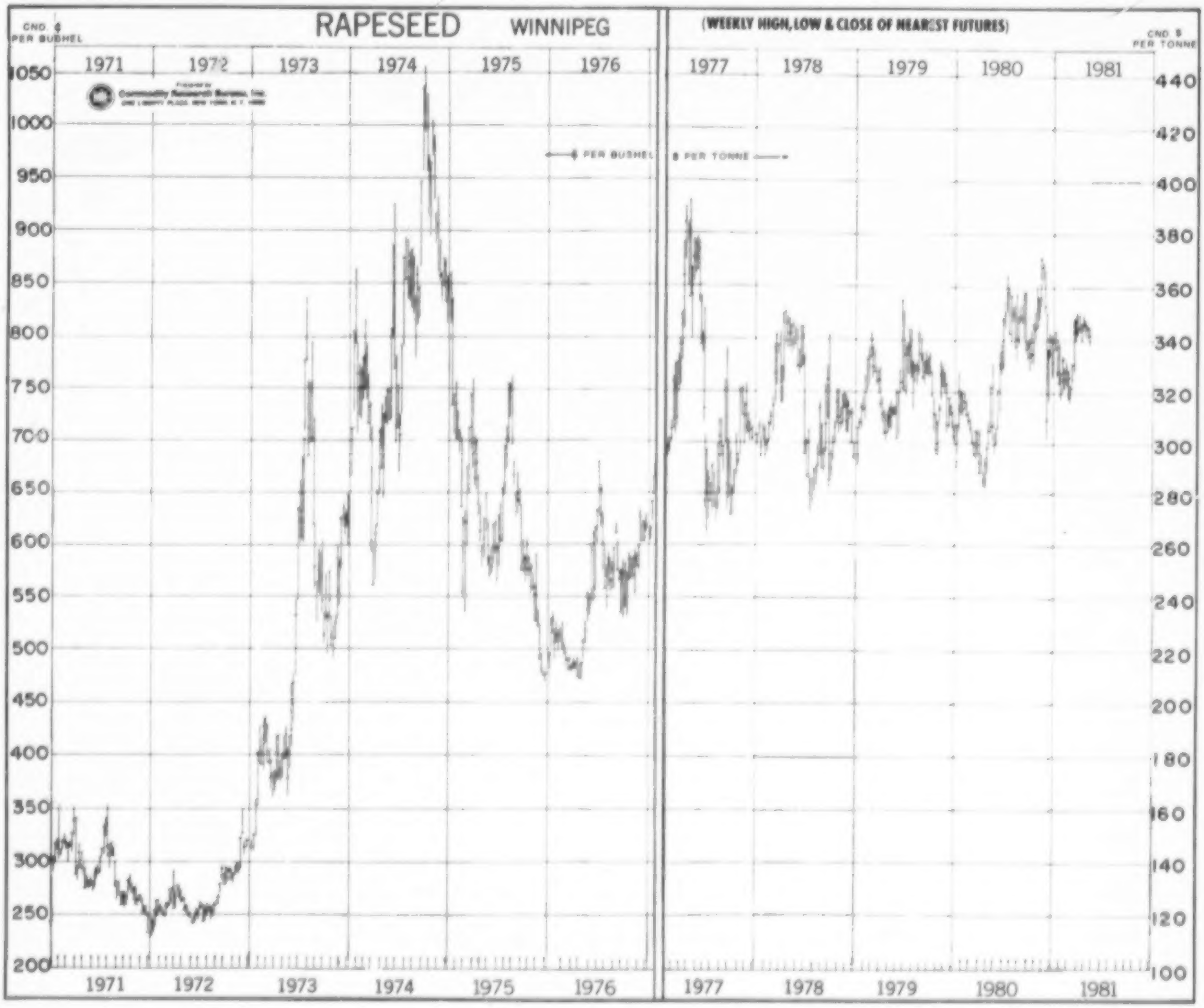
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1968	15.2	15.2	15.2	15.2	15.2	14.1	13.8	13.8	13.8	13.8	13.8	13.8	14.4
1969	13.8	13.8	13.8	13.8	13.8	13.8	13.8	13.8	13.8	13.8	13.8	13.8	13.8
1970	13.8	13.8	16.2	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	16.4
1971	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
1972	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
1973	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
1974	17.5	18.4	21.0	21.0	30.6	45.0	45.0	45.0	46.2	47.5	45.8	59.0	36.8
1975	59.0	59.0	59.0	59.0	59.0	59.0	59.0	59.0	59.0	51.2	46.0	46.0	56.2
1976	46.0	46.0	46.0	46.0	46.0	46.0	46.0	44.2	39.0	39.0	39.0	39.0	43.5
1977	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0
1978	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0
1979	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0	39.0
1980	47.0	47.0	47.0	47.0	47.0	47.0	47.0	46.0	46.0	46.0	46.0	46.0	46.6

Source: Economic Research Service, U.S.D.A.

Month End Open Interest of Rapeseed Futures in Winnipeg In 20 Tonne Units

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	9,288	11,435	11,869	11,908	14,442	14,300	17,778	20,456	17,960	18,672	16,707	15,299
1979	15,288	15,164	16,338	15,593	12,993	14,209	12,950	13,596	15,001	21,300	21,827	21,966
1980	15,718	17,516	13,392	14,285	17,722	17,254	17,126	17,108	18,827	22,036	21,911	20,504
1981	15,376	15,326	18,028	18,764								

Source: Winnipeg Commodity Exchange



High, Low & Closing Prices of June Rapeseed Futures in Winnipeg In Dollars per Tonne

Year of Delivery		Year Prior to Delivery								Delivery Year						Life of Delivery
		Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Range
1978	High	—	—	—	—	259.0	268.0	272.0	297.0	302.0	294.5	306.1	338.3	351.5	348.0	345.0	351.5
	Low	—	—	—	—	253.0	243.2	244.6	270.2	285.0	279.0	287.0	303.0	316.0	334.8	313.0	243.2
	Close	—	—	—	—	253.0	257.3	272.0	288.5	288.5	287.0	301.3	323.9	346.7	340.6	313.0	—
1979	High	—	286.0	284.0	268.0	284.0	288.0	312.8	304.0	307.5	315.5	340.2	337.7	318.4	316.5	354.5	354.5
	Low	—	278.5	263.7	255.8	258.0	269.0	282.1	289.5	296.0	294.0	314.4	314.0	301.8	306.0	302.5	255.8
	Close	—	286.0	265.2	263.0	270.1	280.0	302.3	300.0	297.0	314.5	336.0	316.3	307.3	307.5	329.5	—
1980	High	301.0	315.9	354.5	351.0	340.0	339.0	340.5	339.0	331.8	342.0	330.5	319.9	295.1	331.2	326.2	354.5
	Low	295.0	299.0	315.9	319.0	321.0	326.7	314.1	320.0	318.5	301.0	318.5	291.0	282.0	287.6	299.5	282.0
	Close	299.0	315.8	329.5	325.5	337.0	335.6	324.0	330.5	319.5	324.5	319.4	291.0	289.5	299.9	317.0	—
1981	High	—	—	—	370.0	383.5	389.0	382.5	375.5	387.5	375.9	351.8	350.6	350.5			
	Low	—	—	—	367.5	360.0	365.0	359.1	391.0	325.5	334.0	337.9	334.5	340.0			
	Close	—	—	—	367.5	372.5	368.5	376.0	387.0	368.0	337.0	345.8	350.0	347.5			
1982	High	—															
	Low	—															
	Close	—															

Source: Winnipeg Commodity Exchange

Rayon and Other Synthetic Fibers

World Production of Rayon &/or Acetate Filament Yarn & Monofilaments In Thousands of Metric Tons[3]

Year	United States	Bel./Netherlands	Brazil	Canada	France	W. Germany	E. Germany	Un. Kingdom	Italy	Japan	India	Poland	Spain	China	U.S.S.R.	World Total
1968	805.2	110.7	81.3	46.1	109.5	157.2		214.7	201.7	313.7	112.4		39.9		454.1	3,132
1969	774.4	110.7	75.0	39.9	117.3	170.6		212.7	205.9	312.4	116.8		43.4		467.4	3,131
1970	730.8	110.1	73.4	30.6	113.8	169.5		200.4	186.3	299.6	121.9		44.8		489.6	3,070
1971[3]	341.4	47.7	33.6	15.1	52.8	75.1	34.0	85.2	83.1	120.9	55.2	28.8	22.5	20.0	230.0	1,401
1972	296.2	47.2	36.7	15.2	49.8	70.6	32.0	67.2	67.8	119.0	61.3	29.2	21.8	22.0	245.3	1,342
1973	288.2	47.1	40.8	15.1	49.2	71.1	33.0	72.6	66.4	128.3	56.8	30.1	21.6	26.4	259.3	1,362
1974	241.9	47.9	35.9	14.6	42.1	69.4	34.0	70.1	54.2	115.6	56.9	30.5	22.0	44.5	267.0	1,302
1975	166.1	35.3	30.7	13.1	28.1	48.8	32.9	62.5	41.3	103.2	54.2	28.3	16.4	49.0	281.4	1,136
1976	160.8	39.0	34.2	5.7	24.4	66.3	36.2	70.6	46.7	109.3	60.6	28.7	15.6	55.0	286.1	1,188
1977	160.0	36.2	28.8	11.0	20.8	63.7	36.0	62.6	44.4	107.4	58.9	28.6	15.0	61.0	295.0	1,172
1978	164.6	36.0	24.1	12.3	19.3	59.7	34.0	59.7	39.3	109.8	62.4	28.0	13.8	65.0	300.0	1,167
1979[1]	169.2	36.1	24.4	14.1	18.5	58.1	35.0	59.2	38.4	114.3	60.5	27.2	12.6	68.0	298.0	1,176
1980[2]	161.5															1,166
1981																

[1] Preliminary. [2] Estimate. [3] Data prior to 1971 are in MILLIONS OF POUNDS. *Source: Textile Organon*

World Production of Rayon &/or Acetate Staple & Tow In Thousands of Metric Tons[3]

Year	United States	Austria	China	Czechoslovakia	France	W. Germany	E. Germany	Un. Kingdom	Italy	Japan	Poland	Spain	Sweden	India	U.S.S.R.	World Total
1968	789.1	136.2		107.4	147.3	392.9		356.0	209.2	765.9	117.1	65.5	68.1	136.9	480.4	4,647
1969	801.8	143.5		105.8	171.1	381.0		342.8	233.0	781.5	116.8	79.6	65.9	129.2	491.6	4,694
1970	642.4	149.0		104.9	173.9	301.4		354.3	203.0	785.1	116.6	76.3	65.9	139.8	516.5	4,504
1971[3]	289.5	75.3	25.0	48.1	79.0	89.5	121.0	161.5	95.7	354.4	53.5	38.3	31.8	61.0	243.0	2,054
1972	336.2	82.6	27.4	48.9	84.5	73.0	130.0	172.8	99.7	367.9	59.7	45.7	33.3	70.7	262.4	2,217
1973	327.3	86.1	32.9	45.6	86.2	80.0	132.5	191.4	94.2	383.4	65.1	45.8	33.9	63.2	283.8	2,298
1974	301.8	88.6	55.4	50.5	83.7	80.0	132.0	147.1	85.4	328.7	66.6	46.0	32.6	77.6	301.6	2,230
1975	173.7	74.0	61.0	49.6	55.3	43.0	135.6	126.7	46.3	255.6	67.4	35.8	18.5	67.1	309.0	1,824
1976	220.6	88.9	70.0	50.3	60.3	51.0	136.8	118.6	59.8	250.3	66.9	41.0	30.4	83.7	325.8	2,022
1977	242.7	90.2	77.0	50.6	60.7	46.0	131.0	113.6	62.3	272.7	67.1	43.1	33.1	87.1	334.0	2,109
1978	245.7	96.0	80.0	49.5	55.2	49.0	129.2	124.4	46.9	279.4	65.4	46.6	36.9	92.0	335.0	2,151
1979[1]	252.7	98.8	85.0	45.0	58.9	50.0	130.0	139.2	39.0	290.4	56.6	45.3	36.9	92.2	337.0	2,204
1980[2]	204.1															2,200
1981																

[1] Preliminary. [2] Estimate. [3] Data prior to 1971 are in MILLIONS OF POUNDS. *Source: Textile Organon*

World[5] Production of Non-Cellulosic Man-Made Fibers (Except Olefin) In Thousands of Metric Tons[8]

Year	United States					Canada	France	W. Germany	Italy/ Malta	Taiwan	Japan	Korea	Benelux	U.S.S.R.	United Kingdom	World Total
	Text. Glass Fiber[1]	Non-Cellulose Fiber[2]			Total[5]											
		Yarn[3]	Staple[4]	Total												
1968	402.7	1,662	1,567	3,229	3,633	140.4	291.9	796.1	395.3		1,415		227.0	289.5	591.7	7,906
1969	501.4	1,767	1,761	3,528	4,029	151.0	344.6	997.2	471.4		1,666		275.2	313.7	642.4	9.211
1970	467.3	1,793	1,793	3,586	4,053	142.5	386.2	1,086	472.7		2.139		267.2	367.5	742.5	10,362
1971[8]	212	873.7	929.2	1,803	2,015	74.7	213.9	599.9	277.3	77.0	1,103	61.6	138.3	203.0	357.5	5,609
1972	259	1,101	1,142	2,242	2,501	75.3	237.9	639.6	291.6	102.1	1,054	81.6	149.2	238.6	373.9	6,377
1973	312	1,323	1,318	2,641	2,953	93.6	266.3	808.4	336.7	128.0	1,247	115.7	163.2	286.9	453.9	7,640
1974	310	1,352	1,233	2,584	2,894	92.0	237.7	764.9	296.7	142.8	1,126	151.7	155.3	318.5	396.1	7,487
1975	248	1,255	1,191	2,445	2,693	95.8	204.5	625.3	276.9	234.6	1,021	262.7	122.9	362.0	361.1	7,353
1976	307	1,266	1,480	2,746	3,052	96.6	248.8	759.4	376.6	272.4	1,204	309.3	146.3	400.0	414.2	8,601
1977	357	1,415	1,622	3,037	3,392	112.8	243.9	690.2	330.1	364.4	1,280	349.9	139.3	456.0	358.8	9,149
1978	419	1,737	1,793	3,530	3,949	123.1	246.4	729.4	354.4	464.2	1,376	432.5	142.7	475.0	406.4	10,034
1979[6]	460	1,884	1,942	3,826	4,286	121.6	224.0	759.5	360.2	521.3	1,363	477.3	135.6	476.0	381.1	10,614
1980[7]	393	1,698	1,882	3,580	3,973											10,492
1981																

[1] Textile glass fiber of all types, including some staple. [2] Acrylic fiber, nylon, polyester, saran, etc. [3] Includes monofilaments as well as some saran staple. [4] Includes tow, but does not include some saran staple. [5] The textile glass fiber data are included in the U.S. total & excluded from the rest of the world data. [6] Preliminary. [7] Estimate. [8] Data prior to 1971 are in MILLIONS OF POUNDS. *Source: Textile Organon*

RAYON AND OTHER SYNTHETIC FIBERS

U.S. Rayon and Acetate Distribution In Millions of Pounds

	Yarn & Monofilaments								Staple & Tow & Fiber Fill						
	Producers' Shipments								Producers' Shipments						
	To Domestic Consumers								To Domestic Consumers						
Year	Industrial	Textile	Acetate	Total	Export	Total	Import	Domestic Consump.	Rayon	Acetate	Total	Export	Total	Import	Domestic Consump.
1968	188.6	164.9	426.4	779.9	17.6	797.5	14.6	794.5	720.0	48.5	768.5	5.4	773.9	125.0	893.5
1969	159.0	135.7	444.7	739.4	16.0	755.4	4.1	743.5	737.9	42.3	780.2	5.0	785.2	91.2	871.4
1970	133.4	117.7	444.8	695.9	38.3	734.2	3.7	699.6	599.9	34.3	634.2	7.8	642.0	80.6	714.8
1971	164.5	132.5	432.3	729.3	33.2	762.5	5.2	734.5	643.6	26.2	669.8	3.7	673.5	81.3	751.1
1972	141.1	105.8	385.9	632.8	23.9	656.7	10.8	643.6	690.7	27.7	718.4	2.0	720.4	51.3	769.7
1973	121.8	75.8	392.3	589.9	60.7	650.6	18.1	608.0	709.5	25.0	734.5	14.7	749.2	47.4	781.9
1974	99.4	53.7	320.3	473.4	48.8	522.2	9.2	482.6	569.5	19.7	589.2	36.0	625.2	38.7	627.9
1975	74.9		293.7	368.6	32.9	401.5	9.2	377.8	373.4	12.0	385.4	20.2	405.6	37.9	423.3
1976	65.1		249.4	314.5	40.3	354.8	25.1	339.6	461.0	11.0	472.0	35.6	507.6	43.2	515.2
1977	68.1		259.4	327.5	25.2	352.7	23.5	351.0	444.9	8.0	452.9	62.3	515.2	57.8	510.7
1978	63.0		274.6	337.6	28.6	366.2	25.7	363.3	459.2	7.0	466.2	96.5	562.7	41.1	507.3
1979	55.0		288.4	343.4	31.8	375.2	13.3	356.7	442.4	7.0	449.4	100.1	549.5	16.5	465.9
1980[1]	47.5		269.2	316.7	32.7	349.4	8.3	325.0	390.7	7.0	397.7	61.0	458.7	10.3	408.0
1981															

[1] Preliminary. *Source: Textile Organon*

U.S. Domestic Shipments of Synthetic Fibers In Millions of Pounds

	Yarn & Monofilaments								Staple & Tow						
	Cellulosic				Non-Cellulosic				Non-Cellulosic						
	Rayon														
Year	Industrial	Textile	Acetate	Total	Nylon	Olefin[2]	Polyester & Other	Total	Rayon	Nylon	Acrylic & Mod-Acrylic	Olefin & Vinyon	Polyester	Total	Textile Glass Fiber
1968	188.6	164.9	426.4	779.9	1,086	199.0	237.2	1,522	720.0	157.2	467.1	52.4	756.1	1,433	383.8
1969	159.0	135.7	444.7	739.4	1,063	188.6	364.5	1,617	737.9	202.7	473.4	61.7	883.3	1,621	460.5
1970	133.4	117.1	444.8	695.9	1,053	187.0	443.0	1,683	599.9	201.2	430.7	57.3	992.9	1,682	404.9
1971	164.5	132.5	432.3	729.3	1,207	246.5	646.9	2,100	643.6	330.1	463.7	58.9	1,111	1,964	466.7
1972	141.1	105.8	385.9	632.8	1,431	312.4	946.8	2,690	690.7	476.6	536.0	63.6	1,287	2,363	569.2
1973	121.8	75.8	392.3	589.9	1,545	395.4	1,334	3,274	709.5	586.8	662.0	69.3	1,530	2,848	676.0
1974	99.4	53.7	320.3	473.4	1,409	426.3	1,307	3,142	569.5	487.8	514.9	59.7	1,388	2,451	630.8
1975	74.9		293.7	368.6	1,290	436.1	1,489	3,215	373.4	557.9	467.3	54.7	1,474	2,554	533.5
1976	65.1		249.4	314.5	1,279	482.0	1,386	3,147	461.0	665.0	517.3	58.6	1,777	3,019	677.6
1977	68.1		259.4	327.5	1,396	539.6	1,526	3,461	444.9	791.7	619.8	81.3	1,880	3,373	791.6
1978	63.0		274.6	337.6	1,539	579.7	1,523	3,642	459.2	876.4	571.6	90.0	1,968	3,506	886.7
1979	55.0		288.4	343.4	1,631	624.2	1,542	3,798	442.4	913.2	546.6	119.3	2,134	3,714	922.6
1980[1]	47.5		269.2	316.7	1,539	611.7	1,363	3,532	390.7	711.2	585.3	115.0	2,071	3,483	874.4
1981															

[1] Preliminary. [2] Includes film fiber. *Source: Textile Organon*

U.S. Mill Consumption of Fiber & Products & Per Capita Consumption

	Mill Consumption (Million Pounds)											Per Capita Consumption (Pounds)			
Year	Yarn & Monofilaments	Staple & Tow	Total R. & A.[2]	Noncellulosic Fiber	Textile Glass Fiber	Waste	Total Man-made	Cotton	Wool	Silk	Grand Total	Man-made	Cotton	Wool	Total
1968	794.5	893.5	1,688	3,211	383.8	155.4	5,306	4,104	378.4	4.0	9,792	26.7	21.9	2.4	51.0
1969	743.5	871.4	1,615	3,468	460.5	139.2	5,552	3,973	354.9	3.3	9,883	27.9	20.9	2.2	51.0
1970	699.6	714.8	1,415	3,670	404.9	138.4	5,501	3,774	273.3	1.8	9,550	27.8	19.7	1.7	49.2
1971	734.5	751.1	1,486	4,557	466.7	185.0	6,529	3,965	219.3	1.7	10,715	33.1	20.5	1.4	55.0
1972	643.6	769.7	1,414	5,568	569.2	202.1	7,566	3,850	246.9	2.1	11,665	37.8	20.0	1.4	59.2
1973	608.0	781.9	1,390	6,599	676.0	223.3	8,664	3,643	182.1	2.8	12,493	42.1	18.5	1.0	61.6
1974	482.6	627.9	1,111	5,960	630.8	198.6	7,698	3,306	116.5	2.6	11,123	36.3	16.2	.7	53.2
1975	377.8	423.3	801.1	6,081	533.5	204.6	7,417	3,069	132.0	1.0	10,618	35.2	15.1	.7	51.0
1976	339.6	515.2	854.8	6,520	677.6	223.1	8,053	3,389	145.9	2.8	11,590	38.1	17.2	.9	56.2
1977	351.0	510.7	861.7	7,228	791.3	254.6	8,888	3,170	133.9	1.6	12,193	41.8	16.0	1.0	58.8
1978	363.3	507.3	870.6	7,461	886.7	210.3	9,228	3,040	141.6	2.0	12,412	43.2	16.2	1.0	60.4
1979	356.7	465.9	822.6	7,690	922.6	128.2	9,444	3,066	134.4	1.5	12,646	42.7	15.1	.9	58.7
1980[1]	325.0	408.0	733.0	7,169	874.4	107.2	8,784	3,064	133.9	1.5	11,983	37.7	14.8	.8	53.3
1981															

[1] Preliminary. [2] Rayon and acetate. *Source: Textile Economics Bureau*

Man-Made Fiber Production in the United States In Millions of Pounds

Year	Rayon & Acetate								Non-Cellulosic Fiber			Total Ray. & Acet. & N	Textile Glass Fiber	Total Man-made Fiber	Producers' Waste Shipments	
	Rayon Yarn		Acet. Yarn	Total Yarn	Staple & Tow			Total	Yarn	Staple	Total				Rayon	Non-Cell.
	Indust.	Textile			Rayon	Acetate	Total									
1968	202.4	162.9	439.9	805.2	739.1	50.0	789.1	1,594.3	1,662.1	1,567.3	3,229.4	4,823.7	402.7	5,226.4	44.3	122.3
1969	168.6	150.6	455.2	774.4	758.8	43.0	801.8	1,576.2	1,766.9	1,761.0	3,527.9	5,104.1	501.4	5,605.5	39.4	140.3
1970	146.4	121.2	463.2	730.8	607.4	35.0	642.4	1,373.2	1,793.4	1,792.8	3,586.2	4,959.4	467.3	5,426.7	34.5	136.3
1971	180.4	123.0	449.3	752.7	611.7	26.5	638.2	1,390.9	2,187.9	2,104.9	4,292.8	5,633.7	468.2	6,151.9	36.3	157.8
1972	146.7	105.0	401.4	653.1	713.2	28.0	741.2	1,394.3	2,773.3	2,582.4	5,355.7	6,750.0	571.6	7,321.6	38.5	202.7
1973	121.7	76.4	437.2	635.3	696.7	25.0	721.7	1,357.0	3,339.6	2,969.8	6,309.4	7,666.4	688.0	8,354.4	36.8	274.8
1974	112.9	58.9	361.6	533.4	645.4	20.0	665.4	1,198.8	3,443.0	2,780.6	6,223.6	7,422.4	682.9	8,105.3	29.9	246.4
1975	46.1	18.7	301.3	366.1	370.9	12.0	382.9	749.0	3,208.0	2,676.8	5,885.7	6,634.7	546.5	7,181.2	13.2	228.7
1976	52.3	15.3	286.9	354.5	475.4	12.0	486.4	840.9	3,306.4	3,320.2	6,626.6	7,467.5	676.0	8,143.5	14.7	262.3
1977	55.3	15.4	282.0	352.7	527.0	8.0	535.0	887.7	3,674.1	3,653.8	7,327.9	8,215.6	786.7	9,002.3	18.5	291.0
1978	47.0	15.0	300.9	362.9	534.6	7.0	541.6	904.5	3,830.3	3,952.7	7,783.0	8,687.5	923.3	9,610.8	15.7	263.9
1979	41.7	15.1	316.6	373.4	549.4	7.0	556.4	929.8	4,154.3	4,282.3	8,436.6	9,336.4	1,014.4	10,380.8	17.2	236.4
1980[1]	32.2	15.0	308.5	355.7	443.3	7.0	450.3	806.0	3,744.3	4,148.2	7,892.5	8,698.5	867.3	9,565.8	13.5	194.4
1981																

[1] Preliminary. *Source: Textile Organon*

United States Imports of Man Made Fiber Manufactures[1] In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1968	27,576	23,975	24,621	24,829	22,769	20,124	20,749	22,965	24,500	20,625	19,418	24,862	277,010
1969	7,220	8,667	17,477	21,880	18,192	21,284	19,268	21,510	15,968	15,000	16,760	14,598	200,467
1970	21,348	21,460	22,523	21,357	21,143	23,134	26,849	23,146	24,856	22,947	23,202	25,195	277,129
1971	30,091	30,164	41,900	45,931	40,903	42,484	34,824	35,665	44,583	33,922	12,926	31,728	425,125
1972	29,040	29,316	31,372	25,152	31,125	31,935	34,598	43,050	36,396	39,560	42,331	34,027	407,805
1973	39,342	37,026	37,196	29,606	33,635	30,971	29,453	23,544	17,909	22,729	20,252	13,371	335,353
1974[1]	26.3	25.10	25.76	27.12	31.12	33.45	38.37	36.53	31.53	35.88	31.03	28.49	371.25
1975	28.77	24.38	28.76	27.85	30.03	35.69	40.32	37.93	37.97	41.04	35.15	33.67	400.38
1976	36.38	29.56	36.71	35.57	38.84	47.48	54.32	46.68	41.67	36.88	40.68	34.55	479.32
1977	34.20	32.55	37.00	36.29	43.86	59.03	54.82	55.44	51.85	46.69	37.57	41.83	531.13
1978	45.54	46.68	46.34	53.87	59.74	67.70	70.41	64.90	58.31	50.47	41.08	37.54	642.59
1979	47.07	36.31	39.06	38.47	45.19	53.03	52.25	50.84	44.58	42.35	40.18	35.64	524.97
1980	36.39	39.90	39.62	37.37	46.72	55.92	57.69	50.18	52.11	49.19	40.10	35.46	540.64
1981													

[1] Data prior to 1974 are for imports are for staple, tow, and tops. Imports of yarns and monofilaments are very small. (In THOUSANDS OF POUNDS.) *Source: Department of Commerce*

United States Exports of Man Made Fiber Manufactures[1] In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1968	14,232	17,106	15,149	17,010	20,494	17,145	17,897	17,092	17,581	11,773	18,852	20,284	204,643
1969	10,728	11,044	21,414	22,933	21,163	18,537	18,430	20,319	19,896	21,151	20,523	21,729	228,023
1970	23,623	26,357	31,677	26,796	28,192	29,048	25,280	23,527	20,349	21,797	17,575	26,886	301,714
1971	26,477	27,420	30,681	31,908	28,684	27,834	27,115	28,754	36,051	12,576	12,995	21,632	312,123
1972	24,292	26,051	29,779	22,488	27,064	25,813	25,545	26,246	23,054	29,013	27,864	35,675	322,890
1973	37,953	41,859	43,278	48,232	48,112	46,503	45,325	38,295	56,641	54,957	52,238	55,657	569,270
1974[1]	31.00	33.70	38.34	39.82	37.03	37.22	30.46	30.88	30.17	30.66	28.05	23.50	390.73
1975	22.84	20.83	24.50	31.56	27.85	25.73	24.67	27.07	29.20	32.31	28.62	28.55	323.73
1976	26.13	27.22	32.09	29.11	30.14	29.91	25.99	25.59	31.78	30.76	31.33	32.12	352.17
1977	27.67	30.77	34.18	32.02	31.77	31.55	29.36	27.08	35.02	25.81	27.50	34.35	367.08
1978	27.84	29.24	36.83	35.57	39.06	36.63	32.06	35.38	38.12	43.68	44.41	42.88	441.70
1979	42.86	43.91	53.20	45.03	49.28	52.81	44.92	46.69	50.61	56.16	53.00	58.12	596.58
1980	47.25	59.36	69.55	69.01	64.65	70.85	58.44	63.79	63.29	75.94	64.97	64.27	771.54
1981													

[1] Data prior to 1974 are for exports of yarns, monofilaments, staple, tow, & tops. (In THOUSANDS OF POUNDS.)
Source: Department of Commerce

RAYON AND OTHER SYNTHETIC FIBERS

Aver. Wholesale Prices of 65% Acetate/35% Nylon Tricot,[1] F.O.B. Mill[2] In $ Per Yd.

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1968	141	141	142	142	143	143	143	143	143	142	142	141	142
1969	142	142	142	142	143	143	142	142	142	141	141	141	142
1970	141	141	142	142	142	142	142	141	140	133	133	133	139
1971	133	133	128	128	126	125	125	125	124	121	121	119	126
1972	119	118	118	120	122	124	124	124	124	124	122	125	122
1973	125	126	128	130	131	131	131	132	132	132	132	132	130
1974	132	132	132	135	138	136	135	131	131	131	129	122	132
1975	122	122	122	124	124	127	127	126	136	140	140	N.A.	
1976[1]	.518	.503	.483	.458	.433	.406	.393	.378	.350	.340	.341	.343	.412
1977	.345	.350	.383	.419	.420	.446	.450	.440	.438	.445	.435	.435	.501
1978[3]	—	.443	.451	.456	.467	.472					49.6[3]	49.5	49.2
1979	49.1	47.0	46.9	47.5	47.5	47.0	47.4	46.9	46.1	—	47.1	46.9	47.2
1980	47.6	48.8	49.1	48.6	48.2	47.6	49.0	49.4	57.3	55.1	59.3	57.5	51.4
1981	51.0												

[1] Prices prior to 1976 are for YARN, ACRYLIC (spun), knitting—2/20, 3-6 denier IN CENTS PER POUND. [2] Gray, 32 gauge, 54", 3.2 oz./linear yd. [3] Beginning Nov. '78 prices are for 50/50 polyester/carded cotton printcloth, gray, 48", 3.90 yds./lb., 78 & 54–56. *Source: Bureau of Labor Statistics*

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Rice

Despite severe early season weather problems (drought in the Southern rice area and cool weather in California) the U.S. rice crop increased to a record 145.1 million cwt. The average U.S. yield of 4,403 pounds per acre was 140 pounds below the 1975–79 average. The nearly 10 percent increase in production from 1979 was the result of the nearly 15 percent increase in harvested acres to 3.3 million from 2.9 million acres.

Beginning stocks on August 1, 1980 for the 1980/81 marketing year stood at 25.7 million cwt., off nearly 19 percent from the previous year. However, with the record 1980 crop, total U.S. supply for the 1980/81 marketing year reached an all-time high of 170.8 million cwt. Stocks as of January 1, 1980 of milled and rough rice were 96.1 million and 5.7 million cwt., respectively. Rough rice stocks by type of grain included 57 percent long, 36 percent medium and 7 percent short. About 25 percent of rough rice stocks were on farm.

Domestic use in 1980/81 was estimated by the USDA at 51 million cwt., up 2.1 million from the previous year. Food use, which accounts for two-thirds of domestic disappearance is projected at 34.5 million cwt., up 5 percent from last year. Per capita food use of rice is estimated at 9 pounds and includes two main categories—direct food use and processed food. Direct food use accounts for 80 percent of total food use. Rice for beer brewing and seed (projected at 11.8 million and 4.8 million cwt., respectively) account for the remainder of domestic use.

U.S. exports of rice for the 1980/81 marketing year were projected to reach a record 3.2 million tonnes milled basis (97.5 million cwt. rough basis), up 0.2 million tonnes from 1979/80. Shipments of medium grain rice to South Korea have doubled from those of the previous season and have been the primary factor in the increased exports. Significant additional gains in export shipments have also been recorded by Saudi Arabia. Meanwhile, PL480 shipments are down sharply due to reduced program allocations and inflation.

Farm prices were the highest since 1974 and ranged from $10.20 to $13.10 per cwt. during August–December 1980 and averaged $11.30, which compares with $9.87 in 1979. Since the August–December average price was $1.81 above the $9.49 target price, no deficiency payment was made to rice producers for their 1980 crop.

The 1981 Government Support Program

The 1981 target price for rice is $10.68 per cwt. and the loan rate is $8.01 per cwt. There are no set aside or diversion requirements. The acreage allotment remains 1.8 million acres but producers are not limited to their allotment. However, only rice produced under acreage allotment is eligible for program benefits.

Rice has been eligible for the farmer-owned Grain Reserve since 1977. However, very little rice has ever been placed in the Reserve, a reflection of the fact that rice producers do not have a tradition of owning carryover stocks. Currently, the release and call

World Production of Rough Rice In Millions of Metric Tons

Crop Year	Brazil	Burma	China	Viet-nam[3]	India	Japan	Indo-nesia	Rep. of Korea	Bang-ladesh	Philip-pines	Pakis-tan	Tai-wan	Thai-land	United States	World Total
1968–9	5.2	8.0		4.4	59.7	18.1	16.2	4.4		4.4		3.3	11.2	4.7	289.0
1969–0	6.3	8.0	95.5	5.1	60.6	17.5	17.5	5.7		5.2		3.0	13.4	4.1	299.9
1970–1	6.3	8.1	97.5	5.7	63.7	15.9	23.1	5.6		5.3		3.2	13.3	3.8	309.1
1971–2	5.4	8.2	100.0	6.1	64.7	13.6	18.7	5.6	15.7	5.1		3.0	13.4	3.9	313.8
1972–3	6.2	7.4	98.0	5.9	58.0	14.9	19.0	5.8	14.8	4.4		3.1	12.2	3.9	302.3
1973–4	6.4	8.6	113.0	6.6	66.1	15.2	21.5	5.8	17.6	5.6	3.7	2.8	14.4	4.2	324.3
1974–5	7.0	8.6	120.0	11.9	59.4	15.4	22.5	6.2	17.1	5.7	3.5	3.3	14.5	5.1	330.0
1975–6	8.5	9.2	119.0	10.9	74.3	16.5	22.6	6.5	18.8	5.8	3.9	3.4	15.2	5.8	352.3
1976–7	8.0	9.3	125.5	11.5	64.2	14.7	23.3	7.2	17.7	6.5	4.0	3.6	15.8	5.3	348.2
1977–8	7.5	9.5	128.5	11.3	79.1	16.4	23.3	8.3	19.5	6.9	4.4	3.6	15.0	4.5	370.1
1978–9	7.6	10.5	137.0	9.9	80.6	15.7	25.8	7.6	19.3	7.3	4.9	3.2	17.5	6.0	385.0
1979–0[1]	9.6	9.8	144.0	10.5	63.6	14.9	26.3	7.9	19.1	7.6	4.8	3.1	15.7	6.0	376.9
1980–1[2]	9.7	12.2	141.5	11.0	81.1	12.2	28.7	5.1	21.5		4.7		18.0	6.6	397.4
1981–2															

[1] Preliminary. [2] Estimate. [3] Data prior to 1974–5 are for So. Vietnam. *Source: Foreign Agricultural Service, U.S.D.A.*

U.S. Rice (Rough) Production by Type and Variety In Thousand Cwt.

Year	Long Grain	Medium Grain	Short Grain	Total	Year	Long Grain	Medium Grain	Short Grain	Total
1968	40,115	38,710	10,261	104,142	1975	63,593	52,255	12,589	128,437
1969	43,888	34,508	8,148	91,904	1976	70,051	36,792	8,805	115,648
1970	36,101	31,270	9,955	83,805	1977	62,206	26,272	10,745	99,223
1971	49,973	29,455	8,497	85,768	1978	84,792	36,454	11,924	133,170
1972	42,584	33,985	8,821	85,439	1979	80,692	40,421	10,834	131,947
1973	43,807	39,347	9,611	92,765	1980[1]	87,962	48,786	8,315	145,063
1974	59,934	41,387	11,065	112,386	1981				

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

prices are 140 and 160 percent, respectively, of the loan rate.

World Trends

The 1980/81 world rice crop was estimated by the USDA at a record 397 million tonnes, up over 5 percent from the previous season's drought-reduced harvest. Record crops were projected for India, Indonesia, Thailand, Burma, Bangladesh, and the U.S. Larger crops were projected in Sri Lanka and Malaysia. However, dramatic reductions in Japan and South Korea occurred due to adverse weather, which also lowered China's yield prospects. World rice production is expected to exceed consumption, and a buildup of world carryover stocks is expected.

World rice trade during calandar year 1981 is forecast at a record 13.4 tonnes, up almost 1 million tonnes from 1980.

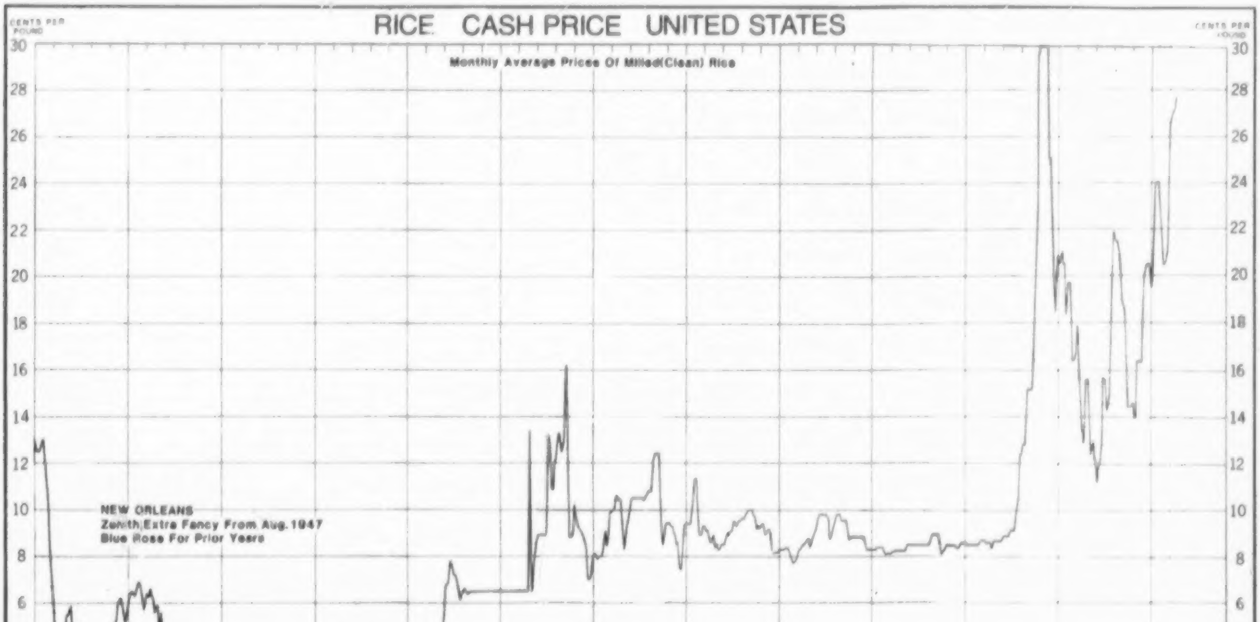
Futures Markets

Futures trading in milled and rough rice was initiated on the New Orleans Commodity Exchange in April 1981.

Average Wholesale Price of Rice[1] No. 2 (Medium Grain) Southwest Louisiana
In Cents Per Pound (In 100 Pound Bags)

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Average
1968–9	8.70	8.10	8.30	8.30	8.50	8.50	8.50	8.50	8.50	8.50	8.50	8.40	8.44
1969–0	8.40	8.50	8.60	8.60	8.60	8.50	8.50	8.50	8.50	8.50	8.50	8.50	8.52
1970–1	8.50	8.50	8.60	8.70	8.70	8.60	8.60	8.60	8.60	8.40	8.70	8.70	8.60
1971–2	8.70	8.70	8.70	8.70	8.90	8.90	8.90	8.90	8.90	9.10	9.10	9.10	8.88
1972–3	9.10	10.00	10.50	12.50	12.50	12.90	12.90	12.90	15.30	15.30	15.30	15.30	12.88
1973–4	16.30	18.50	21.30	29.50	30.00	30.00	30.00	30.00	30.00	30.00	25.00	25.00	26.30
1974–5	23.0	20.0	18.5	20.0	20.8	20.5	21.0	20.5	20.5	18.5	19.5	19.5	20.19
1975–6	19.5	16.8	16.8	17.0	17.8	15.5	15.5	13.5	13.0	15.5	15.5	15.5	16.0
1976–7	13.5	12.5	13.0	12.3	12.3	11.3	11.8	12.1	13.3	15.6	15.5	15.3	13.2
1977–8	14.5	15.0	15.4	20.5	21.5	21.5	—	21.5	20.5	19.0	—	18.5	18.8
1978–9	17.5	14.5	14.5	14.5	14.8	14.0	14.0	14.0	16.5	16.5	16.5	16.5	15.3
1979–0	19.0	20.0	20.5	20.5	19.5	20.0	22.0	23.5	24.0	24.0	22.0	21.0	21.3
1980–1	20.5	20.5	21.0	24.5	26.5	27.0	27.0						

[1] Prior to May 1972 price is for MILLED NATO at New Orleans. *Source: Bureau of Labor Statistics* (0213–0101)



Acreage, Yield, Production, and Prices of Rice in the United States

Crop Year	Acreage Harvested (1,000 Acres)			Yield Per Harvested Acre (In Lbs.)			Production 1,000 Cwt.			Farm Value of Production $1,000	Farm Price of Rough Rice $ Per Cwt.	Wholesale Prices ($ Per Cwt.)	
	Southern States	California	United States	Southern States	California	United States	Southern States	California	United States			Milled No. 2[2]	Houston[3]
1968–9	1,921	432	2,353	4,220	5,325	4,425	81,071	23,004	104,142	521,237	5.00	8.50	9.80
1969–0	1,739	389	2,128	3,987	5,525	4,318	69,346	21,492	91,904	455,045	4.95	8.65	9.90
1970–1	1,484	331	1,815	4,373	5,700	4,618	64,938	18,867	83,805	433,186	5.17	8.90	10.05
1971–2	1,487	331	1,818	4,513	5,200	4,718	68,556	17,212	85,768	457,697	5.34	9.15	10.20
1972–3	1,487	331	1,818	4,415	5,700	4,700	66,571	18,868	85,439	574,907	6.73	13.55	14.45
1973–4	1,769	401	2,170	3,970	5,616	4,274	70,244	22.521	92,765	1,279,990	13.80	27.40	31.75
1974–5	2,054	477	2,531	4,252	5,290	4,440	87,165	25,221	112,386	1,261,359	11.20	19.90	22.05
1975–6	2,277	525	2,818	4,284	5,800	4,558	97,536	30,436	128,437	1,071,924	8.35	17.35	18.35
1976–7	2,081	399	2,480	4,490	5,520	4,663	93,445	22,203	115,648	811,358	7.02	14.10	14.95
1977–8	1,941	308	2,249	4,189	5,810	4,412	81,310	17,913	99,223	941,248	9.49	20.75	21.70
1978–9	2,480	490	2,970	4,358	5,220	4,484	107,592	25,578	133,170	1,087,000	8.16	16.20	18.30
1979–0[1]	2,347	522	2,869		6,520	4,599	97,905	34,042	131,947	1,385,000	10.50	21.35	22.05
1980–1[1]	2,747	548	3,295		6,440	4,403	109,762	35,301	145,063	1,740,000	12.00		
1981–2													

[1] Preliminary. [2] F.O.B. mills, Houston, Texas (medium grain). [3] Houston, Texas (long grain).
Source: Economic Research Service, U.S.D.A.

Salient Statistics of Rice, Rough & Milled (Rough Equivalent) in the United States In Thousands of Cwt.

Year Beginning August	Supply				Distribution					Government Support Program					
					Domestic					Owned By CCC Aug. 1	Under Price Support			Deliveries to CCC	Support Rate $ Cwt.
	Stocks Aug. 1	Production	Imports[2]	Total Supply	Food[3]	Industry[4]	Seed	Total	Exports		Loans	Purchase Agree.	Total		
1968–9	6,784	104,142	10	110,869	26,962	5,755	2,932	35,649	56,053	82	23,640	640	24,280	6,320	4.60
1969–0	16,211	91,904	221	107,269	23,527	7,064	2,510	33,101	56,854	6,087	22,671	1,841	24,512	2,993	4.72
1970–1	16,446	83,805	1,446	101,646	25,100	6,800	2,531	34,400	46,500	6,407	20,787	733	21,520	3,528	4.86
1971–2	18,634	85,768	1,100	105,500	25,500	7,400	2,500	35,400	56,900	9,329	31,235	107	31,342	1,214	5.07
1972–3	11,434	85,439	500	97,400	25,100	7,700	3,032	35,700	54,000	2,720	22,926	—	22,926	1	5.27
1973–4	5,139	92,765	200	98,100	26,100	8,100	3,609	37,800	49,700	148	19,146	—	19,146	—	6.07
1974–5	7,842	112,386	—	120,300	28,600	8,400	4,000	41,000	69,500	—	9,256	—	9,256	—	7.54
1975–6	7,057	128,437	—	135,500	27,700	9,100	3,500	40,300	56,500	—	21,477	1,781	23,258	19,187	8.52
1976–7	36,877	115,648	100	152,600	29,200	10,300	3,200	42,700	65,600	19,187	23,425	608	24,033	8	6.19
1977–8	40,500	99,223	100	139,800	23,500	9,900	4,300	37,700	72,800	18,610	19,557	—	19,557	—	6.19
1978–9	27,400	133,170	100	160,600	33,700	11,200	4,300	49,200	75,700	10,772	27,117	—	27,117	—	6.40
1979–0	31,600	131,947	100	163,600	32,900	11,200	4,800	48,900	82,500	8,143	25,867	—	25,867	—	6.79
1980–1[1]	25,700	145,063	—	170,800	34,500	11,800	4,700	51,000	97,500	1,891	24,939				7.12
1981–2[5]	19,300														

[1] Preliminary. [2] Consists mostly of broken rice. [3] Includes shipments to territories and military food use. [4] Primarily for beer-production. [5] Projected. *Source: Agricultural Marketing Service, U.S.D.A.*

World Exports of Rice (Milled Basis), by Country of Origin In Thousands of Metric Tons

Year	Australia	Brazil	Guyana	Burma	Comm. China	Egypt (U.A.R.)	Uruguay	Pakistan	Italy	U.S.S.R.	Nepal	Taiwan	Thailand	United States	World Total
1968	97	142	96	352	886	570		80	186			68	1,038	1,847	6,320
1969	117	60	74	541	710	770		135	179			35	999	1,850	6,527
1970	111	95	60	719	885	654		130	347			5	1,062	1,740	7,558
1971	186	129	66	800	622	515		197	438			34	1,576	1,415	7,695
1972	154	102	54	244	1,976	298	62	789	238			16	849	1,733	7,547
1973	158	33	49	133	2,096	298	65	771	247	83		49	849	1,630	7,439
1974	145	57	52	206	1,982	136	73	478	461	131		5	1,046	1,702	7,908
1975	185	3	83	288	1,440	104	91	498	451	—		—	933	2,070	7,162
1976	218	76	72	636	1,446	191	115	945	396	130	15	0	1,870	2,045	9,055
1977	260	408	67	686	1,023	223	120	757	275	130	105	150	2,915	2,270	10,442
1978	337	177	106	375	1,373	153	100	703	409	130	85	238	1,573	2,261	9,515
1979[1]	400		85	600	1,095	125	115	1,366	500	130	100	409	2,696	2,263	11,839
1980[2]	450		100	550	1,000	180	120	961	400		10	250	2,685	2,977	12,429
1981															

[1] Preliminary. [2] Estimate. *Source: Foreign Agricultural Service, U.S.D.A.*

RICE

U.S. Exports of Milled Rice[1] by Country of Destination In Thousands of Metric Tons[3]

Yr. Begin. August	Belg.-Lux.	South Africa	Can-ada	Un. Kingd.	Rep. of Korea	Nige-ria	Indo-nesia	Italy	Bangla-desh	Liberia	Saudi Arabia	Switzer-land	Iraq	Iran	Total All Exports
1968-9		1,452	1,347		10,965		7,089	—		732	1,432				39,334
1969-0		1,764	1,254		4,111		8,190	—		1,061	1,417				39,334
1970-1	*1970-*	1,790	1,163	*1970-*	9,166	*1970-*	6,231	—		895	1,098				33,577
1971-2[3]	*74*	82	62	*74*	495	*74*	354	—	75	37	82	13	—	19	1,807
1972-3	*Avg.*	83	65	*Avg.*	471	*Avg.*	173	—	4	29	57	12	—	34	1,788
1973-4	*(14.1)*	86	81	*(40)*	121	*(2)*	60	—	—	28	94	14	9	42	1,608
1974-5		64	60	32	530	3	42	—	250	23	79	12	110	462	2,231
1975-6		82	71	30	129	12	—	46	245	24	117	14	81	174	1,538
1976-7		96	74	32	75	131	409	36	21	51	72	47	37	457	2,105
1977-8	19.2	71.4	73.9	12.3	—	172.0	467.3	163.2	83.6	41.3	169.7	29.4	89.9	343.7	2,270
1978-9	41.8	103.7	77.2	48.7	38.5	183.6	270.4	136.4	3.0	40.6	234.5	51.1	148.2	348.1	2,431
1979-0[2]	85.0	105.5	77.6	30.1	574.7	137.9	225.1	42.0	—	61.9	169.5	64.3	309.6	31.1	2,706
1980-1															

[1] No adjustment of brown & parboiled rice has been made; treated as milled rice. [2] Preliminary. [3] Data prior to 1971-72 are in THOUSANDS OF CWT. *Source: Bureau of the Census, Dept. of Commerce*

Exports of Rice From the United States In Millions of Pounds[1] (Clean Basis)

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Total
1968-9	169.1	342.5	209.4	335.8	361.2	144.3	262.7	244.7	492.4	408.3	628.8	371.6	3,971
1969-0	290.7	254.4	374.6	349.0	361.8	235.5	337.3	306.1	187.6	365.6	498.8	371.5	3,935
1970-1	231.4	189.0	438.1	446.8	220.5	284.0	198.7	259.5	314.6	268.5	365.4	144.3	3,361
1971-2	189.7	439.9	394.7	160.5	232.4	275.6	532.8	219.4	242.4	338.1	532.5	540.6	4,099
1972-3	360.4	241.7	313.3	443.6	407.0	339.8	300.1	478.4	423.5	271.4	159.1	204.3	3,943
1973-4	131.9	215.5	252.8	401.5	405.3	368.5	264.8	286.7	403.7	233.3	311.8	305.5	3,581
1974-5	174.4	329.0	349.8	331.9	442.0	544.9	564.4	556.2	463.9	437.0	555.4	247.7	4,996
1975-6	225.6	164.0	305.8	249.3	396.6	340.1	275.4	298.7	264.4	383.7	348.5	724.9	3,977
1976-7	396.5	319.6	308.2	405.8	574.0	233	313	487	263	529	381	498	4,709
1977-8	494	511	188	634	464	204	427	294	339	364	694	347	4,960
1978-9	325	545	467	371	596	361	416	484	498	531	334	434	5,362
1979-0	310	316	426	320	546	584	557	584	518	585	540	644	5,930
1980-1	419	577	409	474	730	533							
1981-2													

[1] 162 pounds rough—100 pounds clean. *Source: Department of Commerce*

Avg. Price Received by Farmers for Rice[1] in the U.S. In Dollars Per 100 Pounds (CWT.)

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Average[2]
1968-9	5.06	4.92	5.03	5.09	4.92	4.72	4.84	4.80	4.78	4.90	4.80	4.63	5.00
1969-0	4.71	4.99	5.23	5.05	4.98	4.99	4.96	5.01	5.00	4.98	5.10	4.80	4.95
1970-1	5.16	5.18	5.26	5.19	5.09	5.31	5.44	5.36	5.33	5.30	5.20	5.33	5.17
1971-2	5.15	5.24	5.46	5.25	5.30	5.53	5.55	5.60	5.58	5.57	5.58	5.35	5.34
1972-3	5.34	6.37	7.05	7.42	7.64	7.84	8.14	8.26	8.51	8.56	8.74	10.80	6.73
1973-4	10.90	13.30	14.80	16.70	15.50	15.80	16.90	17.20	15.90	17.20	17.50	11.90	13.80
1974-5	10.20	10.90	11.30	11.60	10.90	10.80	11.30	11.10	11.00	11.10	11.20	10.00	11.20
1975-6	9.83	9.19	8.87	8.59	8.51	7.95	7.54	6.17	7.15	7.06	6.82	7.45	8.35
1976-7	6.65	6.56	6.48	6.46	6.57	6.79	6.87	6.81	6.95	7.30	7.24	6.87	7.02
1977-8	8.02	8.12	9.13	10.20	11.00	10.70	10.70	10.70	10.80	10.10	9.58	9.49	9.49
1978-9	8.44	7.56	7.62	7.76	7.98	8.07	7.87	8.18	8.52	8.74	8.73	9.10	8.16
1979-0[3]	10.00	9.81	10.30	9.83	8.41	9.88	11.00	11.70	11.60	11.30	10.20	10.80	10.50
1980-1[3]	10.60	10.20	10.90	11.60	13.10	13.20	13.00	13.40	13.70				
1981-2													

[1] Rough rice. [2] Weighted average by sales. [3] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

Rubber

The International Rubber Study Group (IRSG) in March 1981, estimated 1980 world total rubber production to be down about 5 percent from estimated production in 1979. World production of natural rubber in 1980 was less than 2 percent below 1979 production. World production of synthetic rubber in 1980 dropped nearly 7 percent.

The IRSG estimated total world consumption of rubber in 1980 to be about 3 percent below consumption in 1979. Estimated world natural rubber consumption in 1980 dipped about 1 percent from 1979. Estimated world consumption of synthetic rubber in 1980 dropped nearly 5 percent from 1979. The main reason for the reduced consumption estimate was a sharp drop in U.S. use of rubber; consumption marked time in Western Europe and rose only marginally in Eastern Europe.

World stocks of rubber at the end of 1980 were provisionally estimated by the IRSG to be close to 5 percent below a year earlier. Natural rubber world stocks amounted to around 1.455 million tonnes vs. 1.565 million at the end of 1979, while synthetic rubber stocks totaled about 2.095 million tonnes vs. 2.155 million a year earlier.

Despite reduced consumption of synthetic rubber in 1980, prices advanced significantly in response to continually escalating costs for petrochemical raw materials. In the United States more than 60 percent of synthetic rubber production goes into tires, and significant amounts go into other motor vehicle uses such as hoses and belting. A combination of sharply reduced car production, reduced car use, diminished car size, and increased use of long-lasting radial tires curtailed demand for synthetic rubber. Yet, U.S. synthetic rubber prices increased more than 20 percent in 1980. Synthetic rubbers are made from various chemical derivatives of oil and natural gas. Natural rubber prices in 1980 averaged higher than in 1979. No. 1 Ribbed Smoked Sheets (IRSS) in New York averaged about $1,625 per tonne versus an average of $1,423 in 1979. Early in 1981, rubber prices declined sharply, with the price of rubber on the London Commodity Exchange dropping to the lowest level in 32 months, influenced by sluggish demand and inventory curtailment.

The International Rubber Agreement of 1979 took effect provisionally on October 24, 1980 when countries representing 65 percent of global rubber production and countries representing 65 percent of global consumption had ratified the pact. Its central feature is the provision for a buffer stock of 400,000 tonnes supplemented by a contingency stock of 150,000 tonnes to hold prices within a 40 percent range, the mid-point of which is 210 Malaysian-Singapore cents per kilogram, or about one U.S. dollar.

World Rubber Production[1] In Thousands of Metric Tons

	Natural											Synthetic					
Year	Sri Lanka (Ceylon)	India	Vietnam	Indonesia	Malaysia	Philippines	Thailand	Liberia	Brazil	Other Latin Amer.	World Total	Canada	W. Germany	Japan	States United	United Kingdom	World Total
1970	159.2	89.9	28.5	815.2	1,269	20.1	290.0	83.4	25.0	7.0	3,103	205.4	301.9	697.5	2,232	315.6	5,893
1971	141.4	98.9	34.5	819.3	1,319	21.3	318.8	74.2	24.2	8.0	3,085	197.4	306.4	779.8	2,277	285.4	6,215
1972	140.4	109.1	20.3	773.7	1,304	22.4	336.9	83.3	25.8	9.0	3,120	195.5	300.0	819.4	2,455	316.6	6,765
1973	154.7	123.2	20.6	885.8	1,542	25.9	390.0	85.5	23.4	10.0	3,505	229.8	392.9	967.5	2,607	364.4	7,758
1974	132.0	128.4	22.0	855.0	1,525	37.2	379.5	86.2	18.6	11.0	3,445	208.8	371.8	857.9	2,396	335.8	7,575
1975	148.8	136.0	20.0	822.5	1,459	51.5	355.0	82.8	19.3	12.0	3,315	173.3	315.9	788.7	1,990	260.8	6,855
1976	152.1	147.8	32.5	847.5	1,612	57.8	411.9	82.4	20.3	17.0	3,585	209.9	372.6	941.3	2,425	320.4	8,030
1977	146.2	151.6	35.0	835.0	1,588	60.0	430.9	80.0	22.6	18.0	3,625	237.9	414.3	971.0	2,521	329.2	8,465
1978	155.7	133.0	40.0	902.5	1,607	63.0	467.0	78.5	23.7	19.0	3,755	248.3	407.0	1,029	2,605	293.7	8,850
1979[2]	152.7	147.2	50.0	905.0	1,600	63.0	531.2	73.0	25.0	19.0	3,860	282.5	418.5	1,107	2,675	277.7	9,290
1980[3]	136.7	155.6	50.0	935.0	1,571	64.8	515.0	70.3	26.4	19.0	3,800	252.8	389.9	1,103	2,197	221.5	8,660

[1] Including rubber in the form of latex. [2] Preliminary. [3] Estimate. *Source: Rubber Study Group*

World Consumption of Natural and Synthetic Rubber In Thousands of Metric Tons

	Natural									Synthetic						
Year	Australia	Brazil	Canada	France	W. Germany	Japan	Un. Kingdom	United States	World Total	Canada	France	W. Germany	Japan	States United	Un. Kingdom	World Total
1970	40.2	36.7	50.6	158.2	200.7	283.0	195.2	568.3	2,990	135.5	260.9	358.1	496.0	277.5	1,949	5,635
1971	40.5	41.8	52.0	159.2	198.2	295.0	184.8	587.1	3,093	158.3	283.5	369.2	525.0	274.8	2,127	6,185
1972	46.3	44.2	60.4	160.2	193.0	312.0	174.0	650.9	3,230	172.8	297.8	362.4	588.0	278.2	2,328	6,730
1973	52.1	51.2	60.4	162.3	205.6	335.0	186.5	712.0	3,403	186.2	304.7	442.6	710.0	330.6	2,440	7,575
1974	59.4	75.9	63.3	162.4	193.9	312.0	167.3	738.4	3,518	181.3	308.4	404.2	615.0	279.2	2,210	7,450
1975	49.9	58.7	72.3	156.2	197.1	285.2	170.5	666.0	3,368	179.3	277.7	359.9	584.8	266.3	1,964	7,028
1976	50.0	66.1	84.7	166.8	195.2	302.0	168.3	686.7	3,505	203.9	286.1	438.3	658.0	327.4	2,172	7,915
1977	41.4	71.4	90.4	163.6	176.5	320.0	172.4	802.2	3,715	207.1	294.8	431.2	690.0	321.0	2,472	8,420
1978	41.1	72.5	89.1	163.2	184.9	355.0	139.2	761.4	3,725	203.9	296.2	429.5	741.0	313.4	2,492	8,755
1979[1]	45.4	75.9	93.8	177.0	184.5	390.0	137.5	732.2	3,870	232.0	317.8	447.1	830.0	301.1	2,447	9,050
1980[2]	43.0	80.1	80.0	183.9	186.9	430.2	132.3	583.8	3,830	200.0	310.2	447.6	895.9	261.6	1,986	8,620

[1] Preliminary. [2] Estimate. *Source: Rubber Study Group*

RUBBER

World Stocks[1] of Natural Rubber, January 1 In Thousands of Metric Tons

	In Producing Countries								In Consuming Countries (Commercial Stocks)								
Year	Brazil	Cambodia	Sri Lanka	Indonesia	Malaysia (Peninsular)	Singapore	Thailand	Total	Australia	Canada	France	W. Germany	India	Japan	United Kingdom	United States	Total
1968	10.9	7.5	28.4	75.0	133.8	54.4		450.0	6.2	4.3	15.9	16.7	29.9	38.6	24.0	113.5	487.5
1969	9.6	7.0	29.2	75.0	109.9	52.9		320.0	5.0	3.7	13.7	16.3	20.5	41.3	23.3	109.5	555.0
1970	8.1	6.8	33.3	75.0	101.1	44.0	22.5	310.0	5.5	4.2	25.7	15.0	34.6	54.2	26.7	108.2	695.0
1971	8.4	2.5	34.6	75.0	152.5	57.3	25.0	380.0	4.9	5.2	29.6	17.5	41.6	63.4	25.9	104.2	760.0
1972	11.6	2.5	33.1	75.0	163.9	55.1	27.5	385.0	4.4	6.6	26.5	15.7	47.5	84.3	29.8	135.5	765.0
1973	8.6	7.5	29.0	75.0	195.6	52.1	27.5	415.0	3.5	6.8	27.7	11.8	56.0	64.3	27.4	118.6	695.0
1974	9.7	6.8	46.5	75.0	188.6	68.6	32.5	450.0	5.3	6.8	28.9	11.1	54.5	95.1	28.5	106.0	765.0
1975	12.9	6.3	44.7	75.0	201.1	43.4	32.5	435.0	5.7	8.5	33.4	12.7	47.8	90.8	23.0	117.9	800.0
1976	12.0	5.3	26.0	75.0	230.5	59.2	37.5	475.0	4.0	6.8	23.8	12.5	54.0	104.6	24.2	116.0	785.0
1977	11.3	3.0	33.9	75.0	239.1	38.7	56.9	495.0	4.7	8.2	24.1	12.1	60.2	94.8	31.2	138.5	835.0
1978	13.6	2.5	38.8	75.0	214.8	33.7	60.8	470.0	5.0	11.7	23.0	12.4	57.4	79.3	28.7	123.1	815.0
1979	19.1	2.5	47.4	75.0	245.5	35.8	60.3	505.0	2.7	8.3	20.1	13.7	42.9	30.7	29.0	96.1	785.0
1980[2]	20.8	2.0	61.3	75.0	240.1	51.1	44.7	515.0	3.8	7.3	20.3		54.6	76.5	27.6	132.1	780.0
1981[3]	18.2	2.0	68.3	75.0	227.5	46.3	45.0	495.0	3.5	6.0	23.1		35.3	102.0	25.4	129.5	720.0
1982																	

[1] Exclusive of "Stock Afloat" and unreported gov't. stockpiles. [2] Preliminary. [3] Estimate.
Source: Rubber Study Group (London)

Net Exports of Natural Rubber from Producing Areas In Thousands of Metric Tons

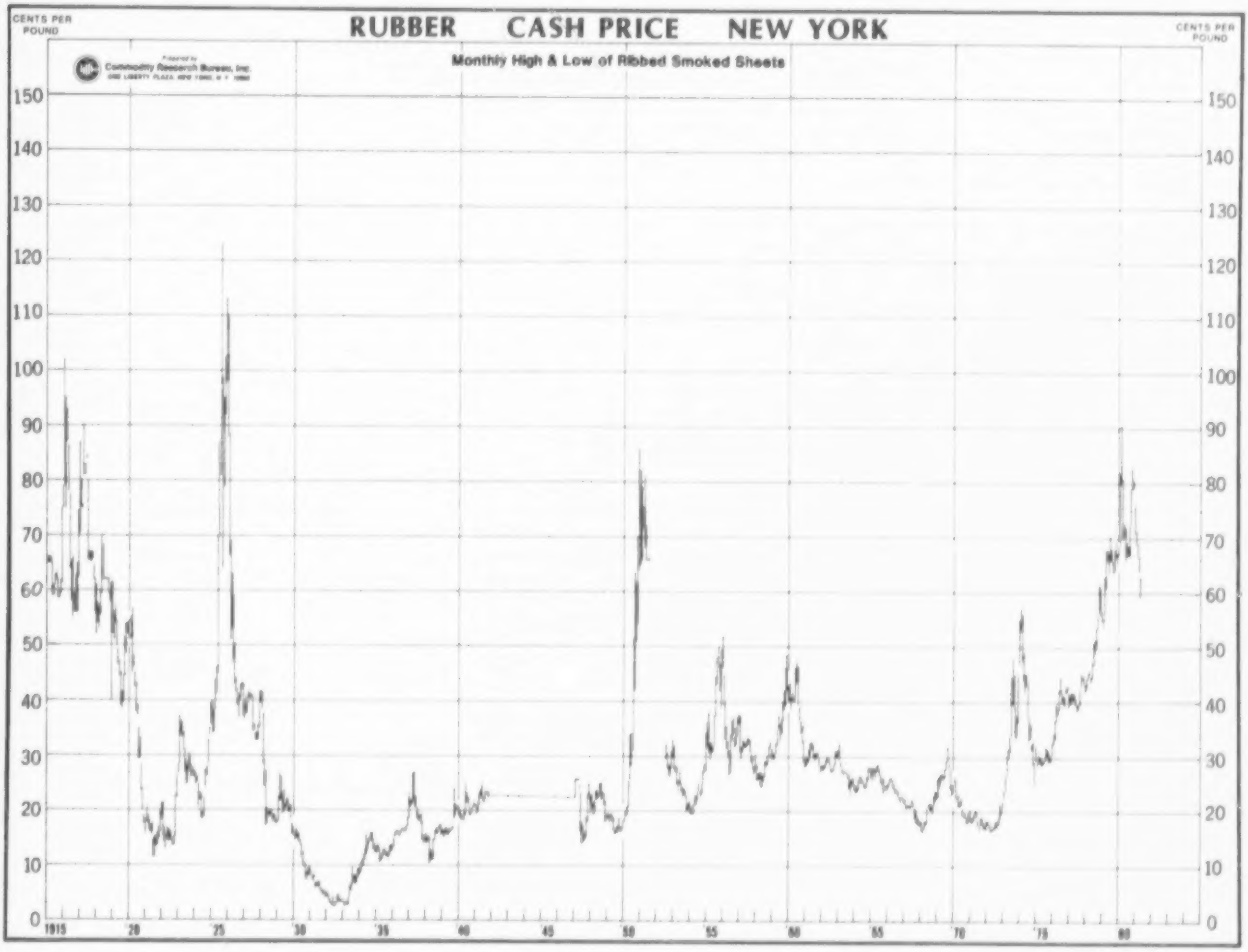
Year	Burma	Cambodia	Sri Lanka (Ceylon)	Indonesia	Malaysia (Peninsular)	Sabah	Sarawak	Thailand	Vietnam	Zaire	Liberia	Nigeria	Other Africa	Papua New Guinea	World Total
1968	9.8	47.4	144.7	746.7	1,065	24.9	24.1	252.2	28.0	32.5	64.0	52.8	49.1	5.7	2,600
1969	10.0	47.7	141.6	833.4	1,223	29.4	39.2	276.4	19.5	35.7	66.9	56.8	54.5	6.0	2,883
1970	9.6	14.5	154.1	766.2	1,251	31.8	21.7	279.2	23.0	40.0	83.4	59.3	64.3	6.5	2,785
1971	11.9	.5	137.8	757.8	1,308	28.6	19.5	307.3	31.1	40.0	74.2	50.2	67.0	6.0	2,835
1972	10.0	9.3	138.3	733.9	1,285	26.3	19.9	324.4	21.8	40.0	83.3	41.2	66.8	5.9	2,810
1973	10.0	19.2	131.1	841.5	1,514	35.3	41.8	368.2	20.5	40.0	85.5	49.4	72.3	5.9	3,180
1974	10.0	26.4	127.6	794.7	1,467	31.6	32.6	365.2	23.0	26.8	86.2	60.0	59.3	5.6	3,110
1975	10.0	10.0	160.9	788.3	1,363	32.0	29.0	334.7	7.5	25.0	82.8	52.7	56.5	5.5	2,920
1976		21.0	136.9	811.5	1,504	35.8	40.3	373.0	34.0		80.7	32.5	60.0	4.6	3,165
1977		14.0	134.5	800.2	1,530	38.8	37.6	404.0	33.0		80.0	35.4	60.0	4.2	3,208
1978		16.0	138.0	863.2	1,489	36.8	39.6	441.8	35.0		78.0	29.4	57.8	4.1	3,245
1979[1]		9.5	128.2	861.0	1,537	33.2	38.6	517.8	40.0		73.0	26.4	51.5	4.0	3,315
1980[2]			100.0	900.0	1,410	31.0	36.0	540.0	35.0		70.0	14.6	56.0	4.0	3,175
1981															

[1] Preliminary. [2] Estimate. *Source: Rubber Study Group* (London)

U.S. Imports of Natural Rubber (Includes Latex & Guayule) In Thousands of Long Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total[1]
1968	46.88	42.06	39.49	42.17	42.72	36.73	51.26	46.06	63.31	36.24	43.69	49.58	540.17
1969	21.81	49.00	59.78	54.39	48.90	46.67	40.84	55.19	49.49	59.45	49.27	50.51	585.28
1970	59.0	44.1	56.8	45.7	42.1	41.6	37.8	33.7	46.6	46.7	46.9	48.9	549.9
1971	45.2	44.7	41.1	42.8	49.8	74.5	47.6	69.6	54.3	44.7	42.1	56.4	612.7
1972	57.9	51.7	64.0	47.6	49.8	36.4	38.7	50.7	39.3	54.7	55.3	56.0	602.2
1973	57.7	48.1	59.4	43.3	55.5	53.4	40.7	66.3	63.7	60.2	56.3	38.3	642.9
1974	53.2	59.1	63.4	50.2	65.3	53.2	73.5	55.0	68.3	35.1	45.2	59.8	681.3
1975	68.2	41.3	51.5	52.3	32.7	58.4	52.7	59.7	54.3	57.1	66.2	62.2	656.6
1976	66.1	55.6	72.1	69.4	46.8	65.7	58.4	40.3	67.5	50.0	52.3	68.8	712.9
1977[2]	70.2	55.6	82.3	72.2	50.0	71.2	72.9	49.3	76.3	73.2	37.4	82.0	792.4
1978[2]	46.7	45.7	71.8	83.4	76.0	54.4	47.8	71.0	77.1	54.9	46.1	71.5	746.2
1979[2]	72.8	64.2	72.8	89.9	55.0	82.0	56.2	58.3	58.9	46.1	43.6	47.9	747.7
1980[2]	76.8	56.0	74.0	38.9	55.3	44.5	38.5	31.4	55.9	31.8	50.3	45.1	598.5
1981[2]													

[1] Includes latex and guayule. [2] Preliminary. *Source: Department of Commerce*



Average Spot Crude Rubber Prices (Smoked Sheets[1]) in New York In Cents Per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1968	17.3	16.4	17.6	17.9	18.6	21.3	20.8	21.0	20.1	21.5	22.8	22.8	19.8
1969	22.1	23.1	25.9	27.0	26.0	26.8	28.5	31.4	27.9	26.5	25.0	23.8	26.2
1970	25.5	25.1	22.3	22.1	21.8	21.6	20.0	19.5	19.1	18.3	18.4	19.3	21.8
1971	18.4	18.0	18.3	19.4	20.0	17.8	16.6	18.0	17.9	17.6	17.3	17.1	18.0
1972	18.0	17.8	17.0	16.5	16.9	17.3	17.5	17.5	18.0	19.4	20.5	21.0	18.1
1973	22.8	25.5	28.6	30.8	31.0	36.8	41.3	41.3	36.4	33.6	39.5	54.0	35.1
1974	53.8	53.8	48.8	42.8	43.8	42.0	34.3	34.8	32.0	32.0	27.5	31.5	39.8
1975	29.0	29.5	29.3	29.3	28.5	29.3	31.8	30.3	30.8	30.0	30.0	30.8	29.9
1976	33.0	35.8	37.0	38.8	40.5	44.0	40.1	40.5	39.6	42.0	43.0	40.0	39.5
1977	40.8	40.8	41.6	40.6	40.8	39.6	39.1	39.9	44.8	44.3	43.8	42.9	41.6
1978	43.0	44.6	45.5	43.9	45.0	49.0	49.4	52.0	54.4	54.3	58.1	55.8	49.6
1979	54.4	57.0	61.5	67.4	75.4	68.8	63.8	65.5	64.0	68.5	67.0	67.9	65.1
1980	73.0	86.5	73.3	72.3	69.0	68.5	67.3	68.0	72.8	79.0	—	73.0	73.0
1981	71.3	69.0											

[1] No. 1, ribbed, plantation rubber. *Source: Bureau of Labor Statistics* (07-11-02.01)

RUBBER

Consumption of Natural Rubber in the United States In Thousands of Metric Tons[1]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1968	49.75	48.20	50.04	48.53	50.23	46.83	41.42	46.83	49.70	54.57	48.97	46.79	581.86
1969	51.8	47.0	50.8	50.0	51.3	50.2	44.2	46.9	52.4	55.6	48.3	49.9	598.3
1970	53.0	51.0	52.9	49.8	37.8	45.8	44.4	45.0	48.3	46.7	41.5	43.2	559.3
1971	46.2	48.3	54.4	49.7	49.7	52.2	43.5	50.9	53.6	54.1	49.8	50.0	577.8
1972	55.3	52.7	59.1	51.9	56.1	53.2	40.9	55.3	54.1	58.5	52.6	52.9	640.6
1973	58.1	56.8	63.2	59.4	57.3	54.5	49.0	56.4	56.3	63.4	57.1	54.0	685.44
1974[1]	65.5	59.4	64.0	59.7	60.8	60.3	51.4	59.9	60.3	69.7	58.2	50.0	719.04
1975	61.2	53.9	52.9	56.3	58.5	58.4	49.4	54.8	61.3	62.0	47.9	53.4	669.97
1976	71.6	59.6	71.7	66.7	44.2	67.5	50.5	42.0	76.2	64.5	56.9	59.4	730.73
1977[2]	67.3	68.5	77.6	68.6	67.7	72.1	57.4	70.0	71.9	68.8	61.3	62.5	780.13
1978[2]	59.2	61.1	63.8	61.2	68.0	61.9	51.7	69.1	65.6	69.5	70.9	62.8	764.65
1979[2]	68.3	66.6	74.5	61.8	60.2	59.0	57.9	63.2	57.7	65.2	55.6	47.9	739.00
1980[2]	62.9	57.3	55.7	46.9	42.3	41.3	38.8	43.2	49.4	49.5			
1981													

[1] Data prior to 1974 are in THOUSANDS OF LONG TONS. [2] Preliminary. *Source: Rubber Manufacturers' Association*

Stocks of Natural Rubber in the United States, Beginning of Month In Thousands of Metric Tons[1]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1968	111.66	108.23	102.10	95.09	94.42	92.64	92.07	99.57	103.02	107.19	104.69	99.79
1969	107.76	98.00	92.15	104.71	107.43	108.52	107.35	104.91	104.45	107.41	104.49	103.06
1970	106.5	104.9	98.6	95.1	96.4	98.3	89.7	92.4	94.7	96.7	92.4	93.6
1971	102.6	91.4	92.9	102.7	98.6	105.9	104.9	122.0	125.6	131.4	124.9	126.4
1972	133.3	128.0	128.0	133.2	129.7	117.0	109.1	102.9	112.3	109.5	109.6	112.3
1973	116.7	122.8	116.8	120.5	117.5	122.2	115.9	113.7	117.2	128.7	122.4	122.5
1974[1]	122.4	124.0	120.1	129.5	130.3	131.0	132.6	155.4	155.2	143.0	129.9	124.5
1975	137.5	125.6	126.9	126.9	125.4	113.1	125.2	118.7	116.8	107.0	104.9	110.7
1976	105.4	99.8	158.2	127.0	140.9	104.7	102.3	106.8	92.6	104.9	—	—
1977[2]	141.8	119.9	127.0	123.8	118.3	119.1	123.9	126.7	136.1	133.5	137.7	129.4
1978[2]	127.7	123.3	116.4	117.1	115.0	122.8	123.4	125.4	126.1	127.7	133.5	124.0
1979[2]	125.6	121.4	115.6	116.1	136.6	130.2	137.7	146.0	144.4	135.6	135.0	124.5
1980[2]	132.1	131.4	135.3	141.4	152.4	145.7	147.2	149.9	138.5	132.9	129.5	
1981												

[1] Data prior to 1974 are in THOUSANDS OF LONG TONS. [2] Preliminary. *Source: Rubber Manufacturers' Association*

Stocks of Synthetic Rubber in the United States, Beginning of Month In Thousands of Metric Tons[1]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1968	369.95	360.27	360.38	358.80	357.83	354.33	364.32	375.64	374.65	361.12	347.40	347.01
1969	370.0	377.5	386.0	395.3	398.7	404.4	410.6	420.9	428.4	423.8	417.1	424.4
1970	441.0	434.4	436.7	433.3	422.4	457.5	455.5	464.7	479.4	481.8	488.3	499.3
1971	514.8	526.3	517.1	497.6	491.2	501	487.8	505.3	483.9	468.3	462.1	480.3
1972	488.2	487.4	478.7	480.1	492.7	491.3	485.1	519.2	512.6	515.5	504.4	495.7
1973	495.7	471.9	473.1	454.8	461.6	469.4	469.9	499.3	501.6	511.2	500.9	494.7
1974[1]	521.0	508.9	507.4	489.4	478.1	503.1	505.6	567.6	583.5	569.1	560.3	585.7
1975	618.7	596.0	590.2	479.3	426.6	424.7	408.2	390.8	378.9	368.0	358.9	365.3
1976	369.9	405.1	406.4	386.7	416.4	453.9	472.7	499.1	513.6	475.5	—	—
1977[2]	458.1	441.4	431.8	407.6	412.9	409.4	402.2	430.4	430.3	422.3	424.5	424.0
1978[2]	426.8	431.0	427.9	434.5	446.9	411.4	433.1	456.5	445.1	437.7	425.3	419.9
1979[2]	424.1	407.1	400.0	393.6	398.9	391.5	401.3	411.3	402.2	402.8	389.9	402.1
1980[2]	402.9	439.9	436.2	427.6	452.2	445.1	429.2	391.2	372.3	339.7	325.4	
1981												

[1] Data prior to 1974 are in THOUSANDS OF LONG TONS. [2] Preliminary. *Source: Department of Commerce*

Production of Synthetic Rubber in the United States In Thousands of Metric Tons[1]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1968	178.79	170.86	180.29	177.88	184.77	173.42	171.50	178.63	172.89	178.43	180.62	183.03	2,131
1969	181.63	174.97	193.14	186.22	191.42	183.57	179.34	182.24	190.23	200.93	187.86	198.64	2,250
1970	193.1	178.9	186.8	178.8	182.4	179.8	181.5	187.3	182.9	185.0	179.4	181.1	2,197
1971	183.6	166.5	181.8	184.1	196.5	182.1	187.5	187.0	187.0	193.8	194.9	196.1	2,241
1972	200.0	193.0	210.1	208.7	210.7	191.0	195.5	202.7	200.4	211.6	201.7	199.1	2,417
1973	216.1	208.0	216.6	223.1	221.2	199.9	210.0	220.4	210.7	227.5	212.6	219.4	2,585
1974[1]	226.1	212.0	229.5	224.1	225.7	212.5	206.0	211.3	208.2	205.1	185.9	154.8	2,498
1975	155.9	136.7	137.1	138.7	153.6	149.8	144.9	172.7	182.0	194.3	185.7	189.2	1,938
1976	191.5	193.1	210.5	204.2	191.4	176.3	156.7	160.7	192.7	209.5	206.3	210.9	2,304
1977[2]	204.0	193.0	213.0	204.8	211.5	201.8	191.3	198.8	201.7	205.6	195.4	196.6	2,418
1978[2]	198.2	192.7	210.3	214.9	211.2	194.4	196.0	205.7	207.4	212.3	212.1	219.1	2,475
1979[2]	207.9	200.8	232.1	216.7	223.3	210.7	202.9	202.8	210.0	213.8	206.0	207.6	2,528
1980[2]	195.6	194.7	206.8	192.4	159.6	129.6	110.3	123.7	149.8	174.6			
1981													

[1] Data prior to 1974 are in THOUSANDS OF LONG TONS. [2] Preliminary. *Source: Department of Commerce*

Consumption of Synthetic Rubber in the United States In Thousands of Metric Tons[1]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1968	163.0	154.3	162.1	155.9	162.7	153.4	135.8	154.3	158.8	179.1	161.9	154.8	1,896
1969	171.4	165.2	175.9	165.2	167.6	166.8	149.4	159.7	178.5	190.8	165.0	168.6	2,024
1970	175.8	170.8	181.5	173.1	131.8	158.8	152.9	154.9	160.4	163.9	144.4	149.6	1,918
1971	163.7	163.5	187.8	174.0	174.2	184.5	152.1	176.7	186.1	190.3	173.3	178.7	2,093
1972	182.2	186.8	201.4	189.7	197.0	197.7	152.1	191.9	195.3	210.2	194.0	193.5	2,292
1973	206.5	199.8	220.6	199.0	197.7	196.1	180.3	197.8	197.4	219.7	196.9	189.0	2,401
1974[1]	222.6	203.5	220.0	208.1	204.1	199.4	177.4	204.0	198.6	213.6	174.5	148.8	2,356
1975	178.4	162.4	143.3	167.5	165.7	170.1	154.3	171.5	183.2	201.2	157.7	167.0	2,022
1976	183.8	195.0	221.9	169.6	151.5	146.7	118.2	142.5	220.2	213.3	211.9	200.6	2,175
1977[2]	216.9	202.7	238.1	200.4	220.1	206.8	159.8	210.5	211.3	204.2	192.9	203.4	2,464
1978[2]	193.2	191.0	200.6	195.7	211.4	194.2	170.0	212.3	211.3	219.9	212.1	209.8	2,436
1979[2]	226.0	201.4	224.4	201.5	212.0	179.6	176.5	202.3	187.9	202.8	174.5	163.3	2,340
1980[2]	170.8	176.1	191.1	148.9	135.7	120.1	131.0	133.7	166.0	167.9			
1981													

[1] Data prior to 1974 are in THOUSANDS OF LONG TONS. [2] Preliminary. *Source: Department of Commerce*

Exports of Synthetic Rubber from the United States In Thousands of Long Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1968	24.35	23.99	26.15	24.86	27.39	21.23	23.67	30.71	37.76	13.86	18.28	18.77	291.03
1969	4.50	7.08	13.55	25.03	23.22	21.60	18.32	23.65	21.68	24.44	20.32	23.11	226.49
1970	23.4	23.7	22.3	26.1	25.3	27.3	23.2	23.3	22.1	24.1	24.5	26.2	290.1
1971	19.8	23.3	27.3	24.4	25.9	20.8	24.4	29.4	35.0	14.2	9.8	15.5	269.8
1972	26.8	26.7	20.0	16.8	20.0	18.1	20.1	22.1	16.5	24.0	21.9	24.0	257.1
1973	23.65	22.21	22.99	22.37	24.18	23.58	20.86	18.97	29.34	25.01	21.60	21.10	275.84
1974	22.41	20.55	27.76	27.50	26.01	21.06	21.08	25.78	21.05	18.00	19.13	16.80	267.12
1975	14.52	17.05	15.06	17.17	15.69	16.78	16.24	18.36	19.28	20.64	21.15	22.57	214.50
1976	21.24	22.55	25.15	21.38	22.55	22.48	24.75	22.70	20.59	21.59	19.86	21.13	267.99
1977	19.11	20.97	24.34	21.48	22.06	20.78	24.72	14.86	26.14	14.59	13.80	17.13	239.98
1978	16.94	18.86	22.55	19.48	24.90	22.28	19.35	20.04	20.77	22.22	23.81	23.77	254.96
1979	23.62	22.29	27.74	29.43	28.74	34.61	34.51	39.37	34.90	38.61	36.53	34.76	385.10
1980	31.46	34.48	41.98	41.68	46.88	37.33	36.54	30.46	25.51	33.45	30.72	32.31	422.80
1981													

Source: Department of Commerce

Production of Auto. Pneumatic Casings[2] & Motor Vehicle Registrations in the U.S. In Ths. of Casings

Year	Total Production of Tires													Regis.[1]
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total	(Dec. 31)
1969	18,081	17,170	18,269	17,283	16,882	17,435	15,447	15,829	17,752	19,151	16,738	17,789	207,826	105.1
1970	18,174	17,522	17,606	17,216	12,642	15,658	15,466	14,657	15,885	15,938	14,560	15,079	190,403	108.3
1971	16,790	17,678	19,693	17,987	18,036	18,911	15,954	17,640	19,204	19,454	17,447	17,584	216,361	113.0
1972	19,064	19,132	20,584	19,005	19,725	20,270	14,765	18,608	19,352	20,999	18,721	19,387	229,611	118.8
1973	21,001	19,993	22,229	19,193	18,693	17,752	14,287	17,325	17,727	19,841	18,035	17,343	223,418	125.7
1974	20,366	19,349	20,497	18,334	18,379	17,830	14,484	17,454	17,426	19,737	15,245	12,294	211,390	130.0
1975	14,753	13,184	12,107	15,222	15,677	16,678	14,531	16,413	17,878	18,821	15,212	16,215	186,705	133.0
1976	17,598	18,200	20,552	16,085	9,856	10,453	8,025	8,954	18,096	21,113	18,827	20,194	187,953	138.5
1977[3]	20,638	20,094	22,640	20,087	19,512	20,734	15,050	19,495	19,321	18,926	17,716	17,425	231,638	143.8
1978[3]	18,290	18,319	18,987	18,828	19,148	18,946	15,108	19,245	19,155	20,497	18,299	18,869	223,406	148.8
1979[3]	20,352	19,592	21,807	18,609	18,544	15,603	14,904	16,911	15,985	17,775	14,480	12,340	206,687	154.4
1980[3]	15,188	15,059	15,082	13,678	11,370	10,716	10,206	12,057	13,911	15,790	12,861	13,346	159,263	
1981														

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[1] Registrations, in millions, of all privately & publicly owned vehicles (except military). [2] Passenger cars, buses, trucks & motorcycle tires. [3] Preliminary. *Sources: Rubber Manufacturers' Association; Motor Vehicle Mfg. Association*

Stocks of Auto. Pneumatic Casings & Passenger[1] Car Registrations in the U.S. In Ths. of Casings

Year	Total Stocks of Tires												Regis.[1]
	Jan. 1	Feb. 1	Mar. 1	April 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1	(Dec. 31)
1969	42,128	45,124	48,469	50,365	48,131	47,433	45,135	44,317	44,686	43,386	42,331	44,898	86.9
1970	49,152	53,750	57,105	56,400	54,620	49,670	45,196	46,055	45,758	45,758	45,586	48,111	89.2
1971	50,175	52,894	56,462	57,656	54,436	53,454	50,821	50,397	50,401	49,396	50,083	51,015	92.8
1972	54,982	59,380	62,689	63,234	60,896	59,753	58,836	57,836	56,895	54,965	55,769	56,319	97.1
1973	60,255	63,646	66,419	66,708	62,872	60,485	56,834	52,341	50,392	47,775	45,636	46,472	102.0
1974	50,275	53,308	57,056	60,553	59,020	58,995	56,322	53,469	53,260	51,645	50,851	53,321	104.9
1975	55,242	58,758	60,970	57,721	54,082	52,037	49,803	46,990	47,405	45,711	46,002	47,569	106.7
1976	50,020	53,172	55,395	54,837	49,125	40,259	32,405	25,581	21,285	24,594	27,581	30,200	110.2
1977[2]	34,768	39,010	43,212	45,616	45,832	46,231	44,887	43,460	45,229	44,542	43,841	45,176	113.7
1978[2]	47,181	51,523	54,321	51,986	50,006	49,276	46,293	44,280	44,057	41,796	40,135	40,394	116.6
1979[2]	43,472	47,212	51,284	52,223	53,540	53,033	46,362	49,397	48,422	46,002	44,357	44,546	120.5
1980[2]	44,873	46,760	49,393	50,471	49,220	46,972	42,817	40,079	37,057	33,730	32,112	32,363	
1981[2]	33,298												

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[1] Registrations in millions, of (Passenger cars only) privately and publicly owned vehicles (except military). [2] Preliminary. *Sources: Rubber Manufacturers' Association; Motor Vehicle Mfg. Association*

How to keep your Commodity Year Book statistics up-to-date continuously throughout the year.

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Rye

The 1980 U.S. rye crop totaled 16.3 million bushels, off 27 percent from 1979, and the third smallest U.S. rye crop on record. A decline in yield and fewer acres harvested for grain were responsible for the small crop. Production was down in every major producing state.

U.S. rye supply for 1980/81 totaled 28.5 million bushels vs. 31.4 million the previous crop year. June 1, 1980 beginning stocks increased to 12.2 million bushels vs. 9.0 million in 1979. Stocks as of April 1, 1981 totaled 6.8 million bushels compared with 15.0 million in 1979. The increased disappearance was attributed to exports of 6.3 million bushels (the highest level since 1974 and up over 4 million from the previous year) during June–December 1980, and to higher domestic feed use. Domestic feed use increased in response to lower rye prices relative to the price of drought-stricken spring wheats and feed grains. Export shipments were divided between Western Europe, Eastern Europe, and Canada.

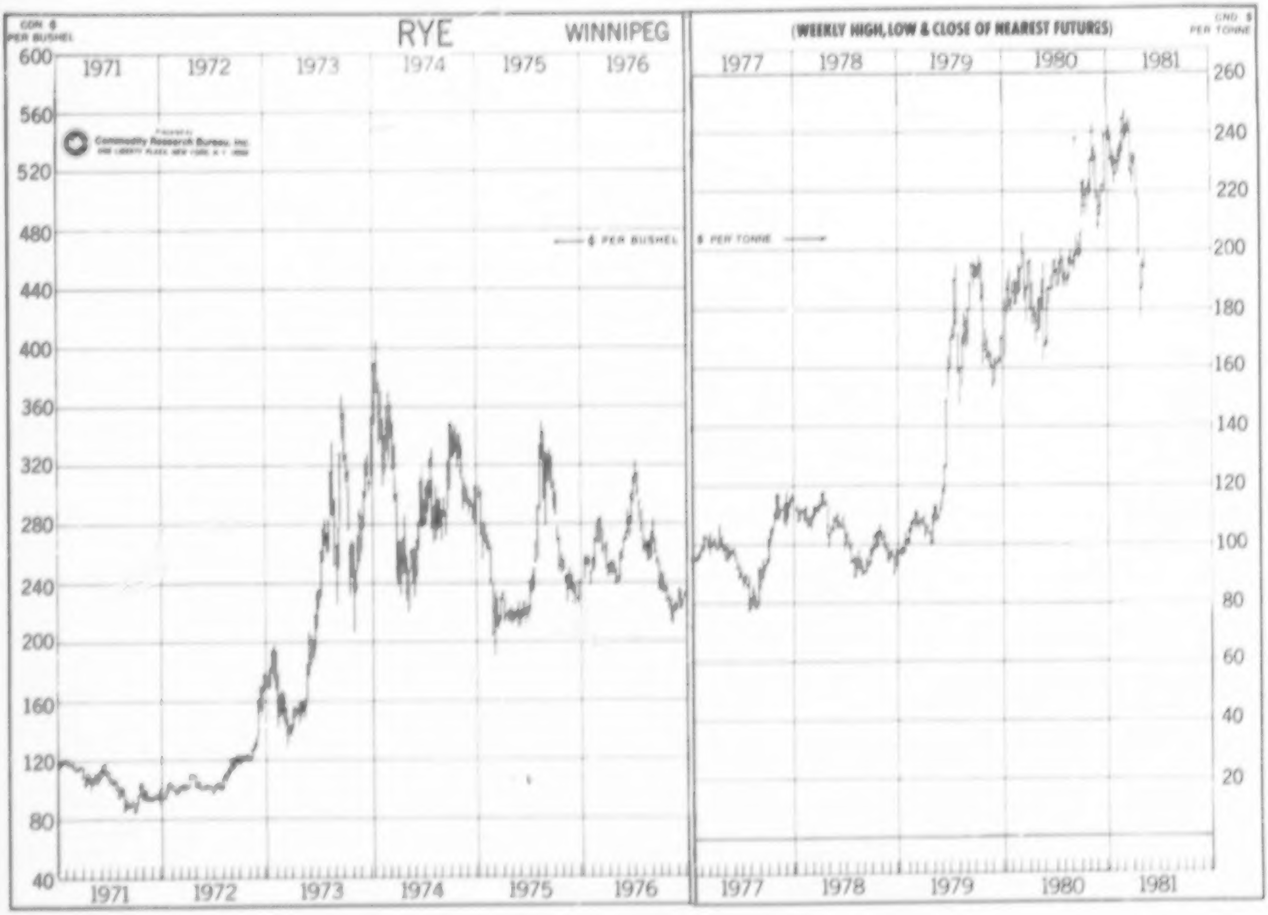
Acreage for the 1981 crop (seeded in fall 1980) increased 3 percent over the 2.5 million acres seeded in 1980. Only small changes were noted in the major rye grain states (Georgia, Minnesota, North and South Dakota). Production in 1981 will depend on acreage harvested for grain and on yields.

Government Price Support

The loan rate for 1981 crop rye is $2.04 per bushel, up $0.13 from the 1980 loan rate of $1.91 per bushel. On April 9, 1981 the CCC announced that it would sell (for unrestricted use) the 270,000 bushels of rye owned by the government at the market price but not less than 150 percent of the 1980 county loan rate where stored.

Futures Market

Rye futures are traded on the Winnipeg Commodity Exchange.



RYE

World Production of Rye In Thousands of Metric Tons

Crop Year	Argentina	Austria	Canada	Czechoslovakia	Denmark	France	Germany		Hungary	Netherlands	Poland	Spain	Turkey	U.S.S.R.	United States	World Total
							West	East								
1968–9	360	413	331	769	127	351	3,247	1,936	238	239	8,438	364	780	12,700	583	31,879
1969–0	377	440	419	687	126	330	2,928	1,544	235	207	8,166	348	770	9,800	767	28,057
1970–1	181	363	570	454	134	306	2,701	1,483	155	172	5,433	256	680	10,800	936	25,596
1971–2	256	448	557	619	150	308	3,188	1,754	182	209	7,827	269	900	10,600	1,252	29,605
1972–3	500	402	344	633	155	350	2,954	1,947	171	151	8,149	263	755	9,600	741	28,212
1973–4	613	400	363	688	140	327	2,693	1,699	175	105	8,268	252	690	10,759	660	28,859
1974–5	306	415	480	671	168	315	2,559	1,949	175	78	7,881	254	560	15,218	483	32,629
1975–6	273	347	523	530	163	292	2,126	1,563	147	63	6,270	241	750	9,064	457	23,702
1976–7	330	410	440	561	214	284	2,100	1,455	156	65	6,922	214	740	13,991	381	29,397
1977–8	170	351	392	540	320	375	2,546	1,500	142	74	6,257	205	690	8,471	462	23,440
1978–9[1]	210	410	605	625	326	432	2,452	1,895	136	68	7,427	259	620	13,603	665	30,583
1979–0[2]	170	336	525	500	280	360	2,082	1,800	100	47	5,000	217	600	8,000	599	21,393
1980–1																

[1] Preliminary. [2] Estimate. *Source: Foreign Agricultural Service, U.S.D.A.*

Salient Statistics of Rye in the United States

Year Begin. June 1	Supply						Disappearance							Acreage		Yield Per Harvested Acre
	Stocks, June 1						Domestic Use									
	Privately Owned[2]	Gov't.[3]	Total Stocks	Production	Imports	Total Supply	Food	Alc. Beverages	Seed	Feed[5]	Total	Exports	Total Disappearance	Planted	Harvested for Grain	
	Thousands of Bushels													Mil. Acres		Bushels
1968–9			19,519	22,971	1,056	43,546	5,563	4,697	5,753	9,157	25,170	1,082	26,252	3,425	996	23.1
1969–0			17,294	30,204	472	47,970	5,392	4,310	6,054	9,529	25,285	805	26,090	3,959	1,291	23.4
1970–1			21,880	36,840	1,047	59,767	5,430	3,522	6,873	11,407	27,232	3,204	30,436	4,196	1,427	25.8
1971–2			29,331	49,223	241	78,795	5,195	3,005	5,262	16,276	29,738	2,177	31,915	4,842	1,751	28.1
1972–3			46,880	28,256	154	75,290	5,122	3,038	5,321	16,458	29,939	6,535	36,474	3,458	1,050	26.9
1973–4			38,816	24,677	1	63,494	6,250	2,547	4,967	8,042	21,806	27,513	49,319	3,380	955	25.8
1974–5	14,175	—	14,175	17,506	277	31,958	5,459	1,386	4,215	7,811	18,871	6,465	25,336	2,828	784	22.3
1975–6	6,622	—	6,622	15,924	944	23,524	4,172	2,060	4,217	7,554	18,003	1,117	19,120	2,829	728	21.9
1976–7	4,404	—	4,404	14,891	248	19,500	3,696	1,930	4,217	5,304	15,147	38	15,100	2,652	719	20.7
1977–8	4,418	—	4,418	16,543	127	21,100	3,648	1,875	4,806	6,800	17,100	24	17,100	2,652	677	24.4
1978–9[1]	4,137	—	4,137	24,065	145	28,200	3,690	2,369	4,900	7,900	18,900	300	19,200	2,865	926	26.0
1979–0[1]	8,973	—	8,973	22,389	—	31,400	3,500	2,100	4,200	7,000	16,800	2,400	19,200	2,921	869	25.8
1980–1[4]	12,000	192	12,192	16,265	—	28,500	3,500	2,200	4,200	8,500	18,400	6,500	24,900	2,527	664	24.5
1981–2																

[1] Preliminary. [2] Includes total loans. [3] Uncommitted, gov't only. [4] Forecast. [5] Residual; approximates total feed use.
Source: Economics Service, U.S.D.A.

Production of Rye in the United States In Thousands of Bushels

Year	Illinois	Indiana	Kansas	Michigan	Minnesota	Georgia	Nebraska	No. Dakota	Ohio	Oklahoma	Oregon	So. Dakota	Virginia	Texas	Wisconsin	U.S. Total
1968	525	417	512	884	1,908	1,554	1,320	4,186	261	680	322	5,348	490		353	22,971
1969	576	525	1,121	1,120	2,268	1,692	2,565	5,175	403	980	390	7,128	442	722	280	30,204
1970	529	485	1,892	1,134	2,850	1,656	4,750	5,249	336	936	250	8,768	486	566	253	36,840
1971	529	432	2,640	850	5,404	1,955	5,880	9,750	396	780	260	12,320	475	378	288	49,223
1972	529	300	500	806	2,990	1,500	1,440	4,615	256	1,260	200	9,108	408	630	210	28,256
1973	462	299	735	675	3,150	1,425	1,300	3,039	232	1,333	168	7,480	322	648	189	24,677
1974	361	216	266	450	1,550	1,900	900	2,650	180	595	184	4,278	324	300	240	17,506
1975	374	234	168	456	2,225	1,350	855	2,975	210	570	192	2,346	230	760	315	15,924
1976	315	230	136	468	2,048	2,090	765	2,831	210	608	168	1,485	264	378	252	14,891
1977	330	260	180	456	2,436	1,995	1,050	2,080	248	646	125	3,480	350	400	364	16,543
1978	368	175	315	600	2,352	2,530	760	5,400	186	570	168	6,200	425	406	357	24,065
1979	391	208	504	625	2,275	2,310	770	4,200	155	910	144	5,700	384	513	368	22,389
1980[1]	368	182	210	504	1,900	1,995	468	1,470	231	816	150	4,030	325	494	368	16,265
1981																

[1] Preliminary, December estimate. *Source: Crop Reporting Board, U.S.D.A.*

U.S. Rye Crop Production Reports and CCC Operations In Thousands of Bushels

Year Begin. June 1	Official Crop Reports				National Average Support Rate		Placed Under Loan	Direct Purchases	Total	Delivered to CCC	Total Stocks Ending May 31			
													Privately Owned[3]	
	July 1	Aug. 1	Dec. 1	Final	$ Per Bushel	% of Parity					Ending Carry-over[1]	CCC Uncommitted	Under Loan[4]	Other
1970–1	35,745	36,186	38,552	36,840	1.02	68	10,880	1,288	12,168	11,246	29,331	16,889	4,250	8,192
1971–2	51,179	52,306	50,935	49,223	.89	57	18,958	1,238	20,196	11,500	46,880	28,073	12,715	6,092
1972–3	30,798	31,315	29,536	28,256	.89	56	6,695	195	6,890	1,500	38,816	—	8,788	30,028
1973–4	24,865	25,506	26,398	24,677	.89	51	443	2	445	—	14,175	—	80	14,095
1974–5	22,020	19,616	19,293	17,506	.89	46	196	—	196	—	6,622	—	30	6,592
1975–6	18,830	18,551	17,875	15,958	.89	39	87	—	87	—	4,515	—	47	4,468
1976–7[2]	16,957	17,382	16,667	14,951	1.20	48		—	100	—	4,404			
1977–8[2]	17,787	18,242	16,998	17,312	1.70	61		—	900	—	4,418			
1978–9[2]	28,518	28,567	26,160	26,160	1.70	56		—	2,900	—	4,137			
1979–0[2]	23,638	23,736	24,549	22,389	1,79	49			2,000		8,973			
1980–1[2]	15,784	16,189	16,265		1.91						12,192			
1981–2					2.04									

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[1] Old-crop rye under loan at end of crop year. [2] Preliminary. [3] Derived by subtracting CCC stocks & loans outstanding from ending carryover. [4] Includes previous crops under reseal. *Source: Economic Research Service; U.S.D.A.*

United States Rye Quarterly Supply and Disappearance In Millions of Bushels

Periods Begin. June 1	Supply				Disappearance							Ending Stocks		
					Domestic Use									
	Beginning Stocks	Production	Imports	Total Supply	Food	Alc. Beverages	Seed	Feed[2]	Total	Exports	Total Disappearance	Gov't. Owned	Privately Owned	Total Stocks
1977–8	4.4	16.5	.1	21.1	3.7	1.9	4.8	6.8	17.1	[3]	17.1	—	4.0	4.0
June–Sept.	4.4	16.5	.1	21.0	1.2	.6	2.4	2.7	6.9	[3]	6.9	—	14.1	14.1
Oct.–Dec.	14.1	—	—	14.1	.9	.5	2.2	1.7	5.3	[3]	5.3	—	8.8	8.8
Jan.–Mar.	8.8	—	—	8.8	.9	.5	.2	1.4	3.0	[3]	3.0	—	5.8	5.8
Apr.–May	5.8	—	[3]	5.9	.6	.3	—	1.0	1.9	[3]	1.9	—	4.0	4.0
1978–9	4.0	24.1	.1	28.2	3.6	2.4	4.9	7.9	18.9	.3	19.2	—	9.0	9.0
June–Sept.	4.0	24.1	.1	28.2	1.1	.5	2.5	1.6	5.7	[3]	5.7	—	22.5	22.5
Oct.–Dec.	22.5	—	—	22.5	1.1	.6	2.2	3.4	7.3	[3]	7.3	—	15.2	15.2
Jan.–Mar.	15.2	—	[3]	15.2	1.0	.7	.2	1.6	3.5	[3]	3.5	—	11.7	11.7
Apr.–May	11.7	—	—	11.7	.5	.6	—	1.3	2.4	.3	2.7	—	9.0	9.0
1979–0	9.0	22.4	[3]	31.4	3.5	2.1	4.2	7.0	16.8	2.4	19.2	2.2	12.0	12.2
June–Sept.	9.0	22.4	[3]	31.4	1.2	.6	2.2	2.0	6.0	.6	6.6	.2	24.6	24.8
Oct.–Dec.	24.8	—	—	24.8	.9	.4	1.8	2.4	5.5	1.6	7.1	.2	17.5	17.7
Jan.–Mar.	7.7	—	[3]	17.7	.9	.6	.2	1.0	2.7	[3]	2.7	.2	14.8	15.0
Apr.–May	15.0	—	[3]	15.0	.5	.5	—	1.6	2.6	.2	2.8	.2	12.0	12.2
1980–81[1]	12.2	16.3	—	28.5	3.5	2.2	4.2	8.5	18.4	6.5	24.9			3.6
June–Sept.	12.2	16.3	[3]	28.5	1.2	.4	2.2	3.1	6.9	3.2	10.1	.2	18.2	18.4
Oct.–Dec.	18.4	—	[3]	18.4	1.0	.5	1.8	2.8	6.1	3.1	9.2	.3	8.9	9.2
Jan.–Mar.														

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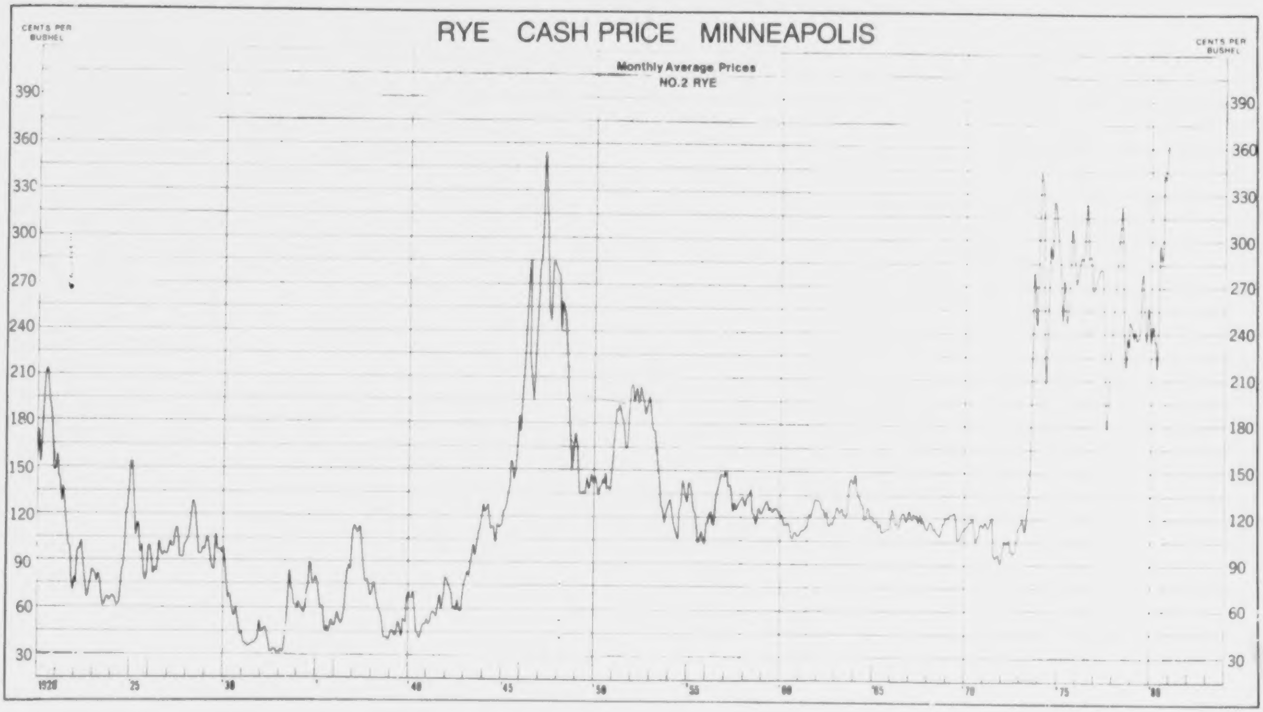
[1] Preliminary. [2] Residual. [3] Less than 50,000 bushels. *Source: Economics Service, U.S.D.A.*

Rye Under Price Support Through the End of the Month (Cumulative Totals from Current Season's Crop)
In Thousands of Bushels

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total
1969–0	—	1,422	3,486	4,469	4,718	4,920	5,903	6,085	6,293	6,415	6,418	6,419	6,417
1970–1	681	3,584	6,394	7,609	8,080	8,432	9,910	10,226	10,669	10,877	10,884	10,883	10,887
1971–2	323	5,828	11,156	13,332	14,357	15,035	17,175	17,779	18,442	18,930	18,949	18,955	18,960
1972–3	50	2,091	4,309	5,393	5,760	5,918	6,288	6,381	6,546	6,696	6,699	6,699	6,700
1973–4	44	253	331	367	407	427	442	442	442	442	442	442	450
1974–5	39	178	190	193	194	194	196	196	196	196	196	196	196
1975–6	8	59	59	63	64	85	87	87	87	87	87	87	87
1976–7	10	21	58	66	91	105	110	123	146	144	144	144	144
1977–8	74	250	647	719	769	800	858	887	917	914	913	913	913
1978–9	114	1,467	2,064	2,325	2,537	2,626	2,818	2,857	3,001	3,031	3,036	3,050	3,050
1979–0	5	338	765	1,106	1,313	1,397	1,592	1,653	1,790	1,882	1,900	1,905	1,905
1980–1	—	97	240	297	348	384	396	399					

Source: U.S. Department of Agriculture

RYE



Average Price of Cash Rye No. 2 at Minneapolis In Cents per Bushel

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Average
1968–9	110	107	112	115	116	118	120	119	121	122	123	120	117
1969–0	115	104	106	110	112	114	113	114	117	115	117	117	113
1970–1	107	105	108	109	114	114	116	116	114	115	120	115	113
1971–2	100	92	95	96	91	99	103	105	104	104	106	99	100
1972–3	98	97	98	105	114	115	113	117	109	110	123	132	111
1973–4	160	217	279	265	246	286	344	338	316	221	209	257	262
1974–5	297	289	307	325	319	305	293	280	256	272	270	249	288
1975–6	258	304	303	301	286	273	282	281	289	288	296	324	284
1976–7	322	288	290	277	268	270	277	280	282	282	279	253	287
1977–8	194	179	206	228	246	256	269	282	294	305	322	293	253
1978–9	259	222	236	233	247	244	237	241	236	238	244	273	244
1979–0	279	247	235	257	249	235	245	235	235	218	244	266	247
1980–1	297	287	292	307	344	340	352	363	389				
1981–2													

Source: Economic Research Service, U.S.D.A.

High, Low & Closing Prices of May Rye Futures in Winnipeg In Dollars per Tonne

Year of Delivery		Year Prior to Delivery							Delivery Year					Life of Delivery Range
		June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	
1978	High	—	—	91.50	99.00	112.20	117.00	119.00	113.50	112.80	114.80	118.00	109.00	119.00
	Low	—	—	82.30	90.00	96.80	105.90	109.50	107.50	104.50	107.90	103.30	98.50	82.30
	Close	—	—	89.90	97.20	111.20	111.00	114.50	108.00	107.90	113.00	105.50	108.50	—
1979	High	—	101.90	98.00	105.20	112.40	111.00	104.00	104.20	109.40	110.50	106.90	113.00	113.00
	Low	—	94.80	92.20	93.30	100.70	101.40	96.00	96.20	100.10	105.00	99.90	100.90	92.20
	Close	—	97.00	94.50	100.30	108.60	102.20	97.80	100.50	108.50	106.70	101.50	112.10	—
1980	High	154.00	188.00	167.50	189.40	191.00	181.00	175.00	192.50	195.00	205.50	196.50	195.50	205.50
	Low	117.50	148.50	139.50	159.40	171.50	170.50	160.80	163.50	182.00	176.00	173.80	168.50	117.50
	Close	143.50	158.00	159.40	184.00	181.50	172.10	169.40	183.00	186.00	187.60	178.50	195.50	—
1981	High	193.50	205.90	194.50	205.70	231.00	250.50	244.00	242.00	244.50	242.50	232.50		
	Low	170.50	189.00	182.10	192.00	201.80	228.00	216.50	223.00	225.50	223.40	176.00		
	Close	192.90	194.00	194.20	203.00	230.00	242.80	237.00	225.50	244.50	230.20	189.50		
1982	High													
	Low													
	Close													

Source: Winnipeg Commodity Exchange

Month End Open Interest of Rye Futures in Winnipeg In 20 Tonne Units

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	2,062	2,242	2,428	2,600	2,306	2,414	2,757	2,969	2,646	2,951	2,598	2,206
1979	2,556	3,238	3,494	3,042	3,372	5,617	6,332	5,988	6,872	6,293	5,751	4,808
1980	4,648	5,028	5,379	6,172	3,313	5,229	5,348	4,839	5,814	6,106	4,250	3,428
1981	3,876	4,811	3,704	3,640								

Source: Winnipeg Commodity Exchange

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Safflower Oil

Safflower Oil Supply & Distribution in the U.S. In Million Pounds

Crop Year Begin. Oct. 1	Supply			Distribution			Factory Consumption[2]							
	Stocks Oct. 1	Production	Total	Exports	Domestic Disapp.	Total	Salad & Cooking Oils	Margarine	Shortening	Other Edible	Paint & Varnish	Other Inedible	Loss	Total
1968	76	100	176	—	115	115	22	42	.9	5	11.7	10.3	—	82.8
1969	61	100	161	25	107	132	19	43	4.5	—	7.9	11.9	1.0	74.5
1970	19	120	149	20	100	120	12	22	1.2	4	8.3	7.1	.7	49.3
1971	29	140	169	40	90	130	11	19		3				
1972	39	150	189	40	118	158	22	20		2				
1973	31	100	131	25	98	123	29	32		1				
1974	8	115	123	25	75	100	17	16		10				
1975	25	100	125	25	75	100	22	7		—				
1976[1]	44	75	119	15	70	85	22	10		—				
1977[1]	25	95	120	25	74	99		8						
1979[1]	41	100	141	25	85	110		10						
1980[1]	31	100	131	25	75	100		5						
1981														

[1] Preliminary. [2] Data are for calendar year shown. *Sources: Bureau of Census; Economic Research Service, U.S.D.A.*

Safflower Oil Wholesale Price, Tanks, (Non-break) New York In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1968	13.7	13.3	13.6	13.8	14.2	14.8	15.3	22.8	22.8	22.8	22.8	15.6	14.7
1969	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6
1970	15.6	15.6	16.3	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.3
1971	17.7	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.3
1972	18.4	18.4	18.4	18.4	18.4	18.4	18.7	19.6	19.6	19.6	19.6	19.6	18.9
1973	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6
1974	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	55.0	55.0	55.0	28.4
1975	65.5	69.0	69.0	69.0	69.0	69.0	69.0	69.0	69.0	52.8	47.0	52.0	64.1
1976	52.0	52.0	52.0	52.0	52.0	52.0	52.0	47.0	41.0	41.0	41.0	41.0	46.2
1977	41.5	41.5	41.5	41.5	41.5	41.5	41.5	41.5	41.5	41.5	41.5	41.5	41.5
1978	41.0	41.0	41.0	41.0	41.0	41.5	41.5	41.5	41.5	41.5	41.5	41.5	41.4
1979	41.0	41.0	41.5	41.5	41.5	41.5	41.5	—	—	—	—	—	41.3
1980	46.5	46.5	46.5	46.5	46.5	46.5	46.5	46.0	46.0	46.0	46.0	46.0	46.3
1981													

Source: Economic Research Service, U.S.D.A.

Safflower Meal Price at San Francisco (20%, Solvent) In Dollars per Short Ton

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1968	27.20	28.50	28.00	27.80	29.00	29.70	30.00	30.00	30.00	31.80	32.00	33.00	29.75
1969	35.00	35.00	35.50	37.00	37.00	35.50	35.00	35.00	35.00	35.00	35.00	35.00	35.40
1970	35.62	38.75	40.00	40.00	40.00	40.00	40.10	41.75	42.00	42.50	43.00	44.00	40.65
1971	44.00	45.00	45.00	45.00	42.00	39.00	39.00	38.20	36.90	35.60	36.40	37.00	40.26
1972	37.25	36.20	36.40	36.10	36.00	36.00	36.00	36.00	36.25	39.10	44.40	52.50	38.52
1973	57.40	64.25	70.50	70.90	71.00	74.75	75.90	82.20	78.30	75.80	79.10	85.70	73.82
1974	88.75	90.90	92.00	93.00	N.A.	66.00	69.25	77.00	77.00	77.00	78.25	82.00	81.01
1975	82.00	79.50	77.00	76.40	70.60	70.00	68.00	66.00	68.40	65.00	65.00	65.00	71.07
1976	67.25	70.00	83.40	84.00	84.00	90.80	96.75	93.70	93.25	N.A.	N.A.	N.A.	85.36
1977	N.A.	87.50	90.40	92.00	92.00	84.00	68.25	56.60	50.00	45.00	55.00	62.00	72.42
1978	59.20	60.00	63.50	57.00	69.10	75.00	73.75	69.00	66.25	75.40	88.00	92.50	70.73
1979	93.00	91.00	85.00	82.75	82.00	80.00	78.00	75.00	68.75	69.80	74.00		
1980													
1981													

Source: Economic Research Service, U.S.D.A.

Salt

The total quantity of domestic salt sold or used by producers decreased an estimated 2 percent in 1980 to 45.1 million tons, according to preliminary data of the U.S. Bureau of Mines. The decrease in sales was attributed to a depressed chloralkali market which uses salt as a primary raw material for the manufacture of many chemicals—notably chlorine and caustic soda. The percentage of salt sold or used by type in 1980 was: salt from brine—54 percent; rock salt—32 percent; vacuum-pan and open-pan evaporated salt—9 percent; and solar salt—5 percent.

The chemical industry consumed about 54 percent of the salt sold or used by producers in 1980, and salt used for highway deicing accounted for about 22 percent.

World Production of All Salt In Thousands of Short Tons

Year	Brazil	Canada	China	France	W. Germany	India	Italy	Japan	Netherlands	Poland	Spain	United Kingdom	United States	U.S.S.R.	World Total
1970	2,013	5,359	17,600	6,044	11,515	6,160	4,815	1,060	3,163	3,200	2,264	10,128	45,896	14,300	160,416
1971	1,628	5,542	18,200	6,057	9,834	5,986	5,042	1,043	3,491	3,262	2,181	10,344	44,077	13,200	159,107
1972	2,390	5,417	19,800	5,773	9,327	7,185	4,497	757	3,090	3,318	2,057	9,810	45,050	13,448	161,350
1973	2,044	5,565	22,000	7,023	11,245	7,566	5,370	1,119	3,355	3,393	2,421	9,390	43,940	13,450	170,483
1974	1,711	6,004	28,000	6,913	12,479	5,812	5,395	1,229	3,734	5,171	2,488	9,282	46,565	13,780	183,236
1975	2,365	5,330	33,000	6,104	10,269	5,353	4,863	1,115	2,965	3,885	3,453	8,410	41,057	15,100	178,207
1976	2,726	6,607	22,000	6,700	12,475	4,892	4,423	1,125	3,336	4,209	3,481	8,825	44,218	15,650	176,305
1977	2,734	6,657	19,000	5,897	13,583	4,144	5,545	1,164	3,429	4,803	2,683	9,041	43,439	15,760	174,567
1978[1]	3,006	7,112	21,536	7,193	13,953	4,828	5,436	1,183	3,240	4,845	2,750	8,058	42,896	15,980	180,505
1979[2]	3,100	7,355	22,000	7,580	14,000	5,000	5,600	1,200	3,200	5,000	2,900	8,100	45,820	16,200	184,958
1980[2]		7,500	23,000	7,600	14,500	5,000	5,700			5,500		8,200	45,100	16,500	190,000

[1] Preliminary. [2] Estimate. *Source: Bureau of Mines*

Salient Statistics of the Salt Industry in the United States In Thousands of Short Tons

		Sold or Used by Producers														
		Evaporated (Mfg.)														
		Bulk					Rock Salt							Exports		
Year	Net Import Reliance as a % of Apparent Consumption	Open Pans or Grainers	Vacuum Pans	Solar	Pressed Blocks	Total Evaporated	Bulk	Pressed Blocks	Total Salt Rock	Salt in Brine	Total Salt	Value[3] Million $	Imports for Consumption	Total	To Canada	Apparent Consumption
1970		348	3,114	1,669	368	5,498	14,090	79	14,170	26,228	45,896	304.8	3,536	423	221	49,009
1971		335	3,289	1,937	367	5,928	13,613	87	13,700	24,449	44,077	303.7	3,855	670	398	47,262
1972		388	3,287	1,799	376	5,850	14,369	66	14,434	24,737	45,022	296.8	3,463	869	627	47,616
1973		525	2,984	1,924	451	5,884	12,275	72	12,347	25,680	43,910	306.1	3,207	609	561	46,508
1974		540	3,032	1,910	440	5,922	14,753	82	14,835	25,779	46,536	360.8	3,358	521	464	49,373
1975	4	526	2,801	1,583	436	5,345	14,200	84	14,283	21,401	41,030	368.1	3,215	1,332	1,315	42,913
1976	7	536	2,908	1,752	412	5,607	15,592	76	15,668	22,917	44,191	431.0	4,352	1,007	958	47,536
1977	8	—3,481—		1,808	388	5,677	14,893	65	14,958	22,777	43,412	451.6	4,529	1,008	963	46,933
1978	10	—3,463—		2,001	381	5,845	14,630	58	14,688	22,336	42,869	499.3	5,380	776	750	47,473
1979[1]	10	—3,726—		2,104	391	6,221	14,827	64	14,891	24,681	45,793	538.4	5,275	793	765	50,275
1980[2]	8										45,100		5,500	1,000		49,600

[1] Preliminary. [2] Estimate. [3] Values are f.o.b. mine or refinery & do not include cost of cooperage or containers.
Source: Bureau of Mines

Salt Sold or Used by Producers in the U.S. by Classes & Consumers or Uses In Thousands of Short Tons

Year	Chlorine	Soda Ash	Textile & Dyeing	Meat Packers, Tanners, Etc.[2]	Canning	Baking	U.S. Govt.	Feed Dealers	Feed Mixers	Rubber	Oil	Paper & Pulp	Metals	Water Softener Mfg.[3]	Grocery Stores	Flour Proc.	Highway Use
1970	21,245	6,445	197	636	222	116		1,379	546	206	214	380	260	704	936		7,807
1971	19,621	6,358	193	653	241	116		1,355	586	172	164	279	182	680	1,236		7,905
1972	20,726	5,791	207	619	228	117		1,386	577	173	202	201	227	698	1,258		9,255
1973	22,598	4,776	201	577	238	122	102	1,370	713	166	215	209	228	687	1,292	85	6,079
1974	23,080	4,563	205	591	241	118	90	1,512	471	157	242	165	252	835	1,252	85	7,757
1975	18,952	4,492	180	579	259	125	119	1,310	552	127	261	172	265	586	991	101	7,680
1976	20,947	4,061	204	578	257	126	74	1,332	593	108	312	213	342	580	998	98	8,930
1977	21,522	2,620	196	569	255	112	72	1,269	556	125	361	222	351	650	1,043	95	8,678
1978	—23,735—		182	540	254	111	86	1,197	654	96	451	221	346	764	1,057	91	8,487
1979[1]	—26,200—		188	546	280	119	78	1,194	723	99	550	194	356	810	1,140	95	8,742

[1] Preliminary. [2] Also casing mfg. [3] Also service companies. *Source: Bureau of Mines*

Sheep and Lambs

The U.S. inventory of sheep and lambs as of January 1, 1981 was estimated by the USDA at 12.9 million head, an increase of 2 percent from 1980. This was the second yearly increase since 1960, the other occurring last year.

The apparent turn-around in sheep and lamb production over the past two years was due to higher returns per ewe. Cost of production studies cited by the USDA showed positive returns over direct cash costs for the past two years. Lamb prices received by farmers averaged in the low and middle $60's the past three years compared with the low $50's in 1977. Lamb prices averaged $63.50 in 1980, down $3.20 from 1979.

Over the past three years, commercial slaughter of lambs as a percent of January 1 inventory has been running below the long-term 1961–1977 average rate of 50 percent or more. In 1980, commercial slaughter was 43.9 percent of the January 1 inventory compared with 40.6 percent in 1979—the lowest in the last 20 years.

Commercial slaughter was 5,574 thousand head of lambs and sheep in 1980, up 11 percent from 1979 as drought forced producers to withdraw expansion plans. Slightly lower dressed weights reduced commercial production to a 9 percent gain or a total of 310 million pounds.

World Sheep Numbers in Specified Countries   In Millions of Head

Year	Argentina	Australia	Brazil	Peru	Iran	New Zealand	Spain[2]	Turkey	United Kingdom	United States	South Africa	Uruguay	U.S.S.R.	China[4]	World[5]
1968	46.0	166.9	23.1	15.1	33.0	60.5	18.6	35.9	20.4	22.1	52.2	21.5	138.5	(68.2)	1,030
1969	44.3	174.6	24.6	15.0	34.0	59.9	19.0	36.6	19.7	21.4	40.4	19.9	140.6	70.3	1,062
1970	42.5	180.1	25.7	17.1	32.0	60.3	18.7	36.4	19.2	20.4	34.1	19.8	130.7	70.6	1,040
1971	39.0	177.8	25.0	16.9	32.0	58.9	18.4	36.5	18.5	19.7	31.6	18.5	138.1	71.0	1,038
1972	40.0	162.9	25.5	12.5	32.0	60.9	17.9	36.8	18.7	18.7	30.2	16.3	139.9	71.3	1,022
1973	41.0	140.0	26.0	13.0	34.0	56.7	17.2	38.8	19.6	17.7	33.3	17.0	139.1	71.6	1,009
1974	41.0	145.2	26.5	13.5	35.0	55.9	16.3	40.1	20.2	16.4	33.6	15.1	142.6	71.9	1,022
1975	38.5	151.7	25.0	15.3	36.5	55.3	16.3	40.5	20.2	14.5	31.6	14.9	145.3		
1976	35.0	148.6	17.3	15.0	33.5	56.4	15.7	41.4	19.5	13.3	31.8	15.7	141.4		718
1977	35.2	135.4	17.2	14.5	33.0	59.1	14.5	41.5	19.9	12.7	32.6	16.6	139.8		676
1978	34.2	131.4	17.2	14.0	33.0	62.2	14.5	42.7	20.5	12.4	32.6	18.9	140.9		681
1979	32.8	134.2	18.0	14.0	32.5	63.5	14.5	43.9	21.7	12.4	32.5	20.7	142.6		693
1980[1]	32.0	136.0	18.5	13.5	32.0	66.0	14.6	44.5	21.7	12.7	32.6	23.3	143.6		701
1981[3]	31.9	131.2	18.5	13.5		68.0	14.3	45.0	22.0	12.9	32.6	23.9	141.5		699
1982															

[1] Preliminary. [2] One year old & older. [3] Estimate. [4] Mainland. [5] Total of selected countries from 1976 to date.
Source: Foreign Agricultural Service, U.S.D.A.

Salient Statistics of Sheep & Lambs in the United States

Year	On Hand Jan. 1	Lambs Saved	In Shipments	Marketings[2]	Slaughter Farm	Slaughter Total[4]	Production	Marketings[2]	Value of Production	Cash Receipts[3]	Value of Home Consumption	Gross Income	Farm Value (1/1) All Sheep
	Mil. Head		Ths. Head				Mil. Lbs.		Millions of Dollars				
1968	22.2	14.4	4,035	15,746	237	12,121	1,166	1,487	256.6	315.2	4.6	319.7	427.2
1969	21.4	13.7	4,119	15,155	233	10,924	1,065	1,447	266.9	343.4	5.6	349.0	470.7
1970	20.4	13.5	4,032	14,823	249	10,801	1,099	1,438	260.4	333.7	5.7	339.4	512.7
1971	19.7	13.0	4,004	14,829	236	10,965	1,071	1,432	250.2	323.0	5.4	328.4	464.5
1972	18.7	12.6	3,976	14,553	224	10,525	1,004	1,396	271.4	353.8	5.7	359.5	427.7
1973	17.7	11.5	3,275	13,077	202	9,799	896	1,277	293.7	389.6	6.9	396.5	472.7
1974	16.4	10.5	2,629	12,060	217	9,064	807	1,185	272.0	368.7	7.9	376.6	535.9
1975	14.5	9.9	2,343	10,768	212	8,047	781	1,059	303.4	385.2	8.5	393.7	442.5
1976	13.3	8.9	2,466	9,516	197	6,911	733		314.9	391.7	9.1	400.7	496.3
1977	12.8	8.6	2,173	8,909	198	6,555	704		321.1	390.5	9.9	400.4	541.3
1978	12.3	8.0	2,151	8,076	174	5,543	697		389.9	462.6	11.2	473.9	636.1
1979[1]	12.4	2.0	2,141	7,728	172	5,189	712		418.5	483.9	11.8	495.7	891.0
1980[1]	12.7	8.0				5,600							992.1
1981[1]	12.9												904.5

[1] Preliminary. [2] Excludes interfarm sales. [3] Includes receipts from marketings & from sales of farm slaughter meats. [4] Includes all commercial & farm. *Source: Crop Reporting Board, U.S.D.A.*

Sheep and Lambs on Farms in the United States, January 1 In Thousands of Head

	All Sheep and Lambs[2]														
Year	Minnesota	California	Colorado	Idaho	Missouri	Montana	New Mexico	Ohio	South Dakota	Texas	Utah	Wyoming	Iowa	Total[2]	Total[1] Stock
1968	591	1,521	1,364	844	333	1,275	873	767	1,356	4,228	1,079	1,847	973	22,223	19,105
1969	576	1,356	1,337	852	306	1,225	840	744	1,240	4,029	1,053	1,860	942	21,350	18,332
1970	554	1,317	1,263	785	288	1,180	834	728	1,155	3,708	1,053	1,853	869	20,423	17,411
1971	504	1,264	1,274	828	251	1,067	742	687	1,201	3,789	1,009	1,829	765	19,731	16,946
1972	467	1,113	1,220	728	230	1,000	714	672	1,181	3,524	976	1,735	735	18,739	15,835
1973	445	1,071	1,204	707	215	955	743	623	1,161	3,214	905	1,678	660	17,641	14,852
1974	415	1,132	1,140	684	224	794	672	582	976	3,090	772	1,505	531	16,310	13,744
1975	390	1,070	990	595	194	770	575	517	792	2,688	697	1,350	460	14,515	12,436
1976	315	1,052	920	536	168	635	590	500	686	2,600	590	1,265	385	13,311	11,427
1977	275	1,113	830	503	134	570	560	445	659	2,520	580	1,206	388	12,766	11,035
1978	255	1,115	810	536	131	530	571	370	704	2,460	491	1,115	370	12,348	10,725
1979	255	1,150	795	466	126	475	604	350	740	2,415	486	1,080	380	12,365	10,786
1980	264	1,175	870	468	123	574	660	320	783	2,400	625	1,050	408	12,687	11,065
1981[3]	295	1,205	810	512	138	595	650	310	810	2,360	660	1,110	437	12,942	11,318
1982															

[1] Stock sheep & lambs; does not include sheep & lambs on feed for market. [2] Includes sheep & lambs on feed for market and stock sheep & lambs. [3] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

Average Wholesale Price of Lambs at Omaha In Dollars Per 100 Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1968	23.88	26.75	26.62	26.88	29.50	28.25	26.88	25.62	26.50	26.50	26.25	25.38	26.58
1969	27.25	27.38	28.25	29.25	30.88	30.38	29.25	28.62	27.75	28.38	27.50	27.50	28.53
1970	28.88	28.75	28.75	26.00	29.00	29.50	28.38	27.12	26.75	26.75	25.38	23.88	27.43
1971	24.00	25.12	26.88	30.25	31.12	31.25	28.88	27.75	27.50	25.88	24.75	25.75	27.43
1972	27.88	28.38	29.38	31.00	33.75	34.00	32.88	31.25	30.00	26.75	27.00	29.25	30.13
1973	33.62	39.25	40.75	34.25	36.25	38.00	39.25	41.50	33.38	31.75	34.75	37.50	36.69
1974	38.38	40.00	37.50	39.50	47.25	46.25	41.25	39.00	36.12	35.88	37.50	38.50	39.76
1975	37.50	40.50	43.00	47.88	50.75	46.12	45.00	41.00	44.12	44.00	45.00	48.13	44.42
1976	49.33	47.75	53.50	60.75	63.88	50.50	45.75	38.88	40.00	39.75	39.00	45.00	47.84
1977	49.50	50.25	51.50	56.75	56.75	53.00	41.25	50.75	55.75	56.88	50.00	58.50	53.38
1978	64.00	67.50	69.38	62.75	71.00	59.50	60.00	59.25	62.50	60.00	59.50	64.00	63.49
1979	73.75	71.25	61.25	70.50	70.75	65.00	61.52	60.62	67.01	65.91	65.00	67.75	67.12
1980	66.00	63.00	61.38	59.50	62.75	64.00	67.50	68.25	65.75	62.00	55.67	53.75	62.46
1981	46.50	54.50											
1982													

Source: Economic Research Service, U.S.D.A.

Federally Inspected Slaughter of Sheep & Lambs in the United States In Thousands of Head

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1968	1,050	840	796	865	920	856	928	930	973	1,063	835	832	10,888
1969	1,007	769	815	829	835	810	822	797	915	913	730	798	10,070
1970	855	742	859	903	795	841	829	789	897	917	735	847	10,009
1971	903	806	920	899	772	827	815	812	919	919	818	846	10,256
1972	847	801	903	786	803	807	737	840	866	937	828	751	9,905
1973	835	700	710	690	858	727	807	844	789	915	747	612	9,234
1974	749	612	772	782	670	581	713	777	842	851	612	595	8,556
1975	663	570	648	627	616	614	635	621	758	701	515	584	7,552
1976	582	513	570	561	429	502	525	563	622	556	517	534	6,474
1977	498	461	579	539	474	550	468	553	568	525	477	441	6,133
1978	425	390	487	430	451	441	406	438	435	457	413	396	5,169
1979	391	354	431	425	421	371	384	415	410	455	386	389	4,833
1980	448	419	470	466	454	400	420	427	466	510	415	468	5,363
1981	489	426	489										
1982													

Source: Economic Research Service, U.S.D.A.

SHEEP AND LAMBS

Cold Storage Holdings of Lamb and Mutton, on 1st of Month In Thousands of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1968	15,308	14,940	12,883	12,843	12,459	11,738	12.426	12,191	10,534	11,855	12,919	14,756
1969	14,139	10,417	9,479	12,201	16,906	15,758	12,946	12,456	15,215	16,022	17,037	17,343
1970	16,134	17,074	18,064	21,794	20,919	18,808	20,032	23,093	22,834	20,738	21,028	19,653
1971	19,336	20,526	19,653	20,403	20,221	22,506	22,848	21,292	19,391	20,719	20,059	18,626
1972	19,260	16,355	12,836	12,238	15,205	19,916	19,277	21,272	21,220	19,171	18,226	17,200
1973	15,704	14,258	11,847	10,920	13,210	15,644	16,004	14,451	12,739	13,083	15,517	14,691
1974	15,034	12,465	13,018	13,749	14,149	16,820	15,909	15,977	15,333	14,198	14,894	14,169
1975	13,690	12,154	11,221	9,254	9,963	8,819	7,388	9,089	10,107	10,749	10,765	11,543
1976	11,785	10,808	11,123	9,244	9,626	10,935	12,261	14,461	15,152	16,958	15,678	16,552
1977	14,535	14,131	13,884	11,813	12,771	14,583	14,381	13,848	13,567	11,630	10,097	9,356
1978	10,096	9,261	8,628	7,947	9,176	10,149	10,011	11,891	11,259	11,323	12,200	11,804
1979	11,716	10,965	10,827	12,022	12,072	12,897	11,483	11,943	11,763	10,951	11,697	11,071
1980[1]	10,751	10,302	9,464	7,945	8,475	8,995	10,229	10,263	8,880	8,336	8.165	9,779
1981[1]	9,142	8,934	7,843	7,927								
1982												

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

Average Price Received by Farmers for Sheep in the U.S. In Dollars per 100 Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average[1]
1968	6.26	6.55	6.86	6.93	6.62	6.50	6.37	6.25	6.49	6.60	6.82	6.89	6.60
1969	7.18	7.63	8.24	8.73	8.34	8.07	8.24	8.53	8.39	8.35	8.15	9.05	8.24
1970	7.95	8.22	8.45	8.11	8.07	8.04	7.99	7.43	7.16	7.09	6.97	6.67	7.68
1971	6.90	7.03	7.34	7.08	6.87	6.50	6.23	6.78	6.39	6.05	6.13	6.22	6.63
1972	6.17	6.69	7.12	6.74	7.08	6.92	7.08	7.32	7.33	7.31	7.78	8.35	7.16
1973	9.36	10.80	12.10	12.10	11.40	12.00	12.40	15.70	13.50	13.30	13.00	14.20	12.70
1974	14.70	15.80	15.10	13.60	12.20	10.60	10.50	10.90	9.80	8.20	8.10	8.90	11.30
1975	9.85	10.30	10.60	11.70	11.60	11.30	11.80	10.80	11.30	10.80	10.80	11.80	11.20
1976	12.60	12.80	13.90	15.30	14.70	12.80	13.40	12.90	12.90	11.90	11.50	13.00	13.20
1977	13.80	13.90	15.40	14.40	13.00	12.00	12.30	12.40	13.40	13.20	14.10	14.60	13.40
1978	16.50	18.40	19.70	19.50	19.20	19.30	19.40	20.80	24.40	24.90	24.70	25.50	21.70
1979	26.20	26.30	28.10	31.00	27.90	24.00	25.10	24.30	26.50	27.20	26.30	25.00	26.30
1980[2]	27.40	30.50	26.90	21.90	21.70	20.30	17.80	19.40	21.40	18.90	19.90	19.90	22.45
1981[2]	25.90	26.30	25.30	25.00									
1982													

[1] Weighted average by quantities sold. [2] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

Average Price Received by Farmers for Lambs in the U.S. In Dollars per 100 Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average[1]
1968	22.20	23.30	24.70	25.60	25.80	25.40	25.00	23.90	24.20	24.40	24.70	24.20	24.50
1969	25.20	26.70	27.40	28.00	28.00	27.70	28.00	27.30	26.90	27.60	27.30	27.20	27.30
1970	28.10	27.90	27.50	26.30	26.80	27.20	27.00	26.70	26.20	26.10	25.20	23.40	26.50
1971	23.10	23.90	25.50	26.70	27.10	28.10	27.10	27.40	25.90	25.40	25.20	25.40	25.90
1972	26.90	28.20	28.70	28.60	30.40	30.70	31.40	30.20	29.10	28.20	27.60	28.70	29.10
1973	32.60	35.30	39.20	35.10	33.60	36.20	35.40	41.80	33.10	32.50	33.80	35.40	35.10
1974	39.30	39.20	36.00	37.40	41.20	42.70	37.90	37.50	33.20	33.20	35.20	36.10	37.00
1975	36.80	37.90	39.80	43.00	45.70	44.80	43.10	39.90	40.50	42.60	44.20	46.30	42.10
1976	47.90	47.20	50.20	54.90	60.10	51.10	46.80	41.50	41.80	42.60	41.90	44.70	46.90
1977	48.30	49.60	49.10	50.80	55.00	50.90	50.60	49.10	51.30	52.60	52.40	56.90	51.30
1978	60.70	63.20	67.10	63.90	66.50	61.80	58.80	58.50	63.70	62.50	61.40	65.70	62.70
1979	74.10	69.90	64.90	70.40	69.70	66.40	64.00	61.40	66.70	65.70	64.90	66.90	66.70
1980[2]	66.40	64.40	67.10	59.20	60.30	64.60	65.30	65.80	66.70	64.30	59.90	58.40	63.57
1981[2]	53.70	54.80	56.60	57.60									
1982													

[1] Weighted average by quantities sold. [2] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

Silk

Salient Statistics of Silk in the United States

Year	World Production (Raw) Million Lbs.	U.S. Unmanufactured[1] Imports[2] (By Country of Origin) — Thousands of Pounds										U.S. Silk Imports[2] — Mil. Lbs.		Mill Consumption	
		Total Imports	Brazil	United Kingdom	France	India	Italy	Japan	Switzerland	China	Korea	Raw	Waste	Total Mil. Pounds	Per Capita Pounds
1968	82	3,978	54	—	—	—	1,735	1,312	—	—	848	2.2	1.8	4.0	.10
1969	86	3,385	135	66	—	—	1,265	1,124	—	—	761	1.9	1.5	3.3	.10
1970	90	1,846	141	2	—	—	911	416	—	—	355	.8	.9	1.8	.10
1971	90	1,702	38	—	—	—	345	1,154	—	—	74	.3	1.4	1.7	.10
1972	93	2,139	76	—	—	—	227	1,339	—	—	106	.6	1.6	2.1	—
1973	95	3,342	79	13	—	—	472	2,197	—	—	15	.6	2.8	2.8	—
1974	99	2,593	145	0	—	—	397	1,476	—	—	107	.4	2.2	2.6	—
1975	104	968	176	1	—	—	0	386	—	353	0	.6	.4	1.0	—
1976	106	2,653	247	1	—	—	98	1,727	—	457	—	.7	1.9	2.8	—
1977	108	1,621	106	0	—	—	0	1,230	—	268	0	.4	1.2	1.6	—
1978	112	1,989	182	0	—	107	1	918	—	607	119	.7	1.3	2.0	—
1979[3]	117	1,565	193	—	—	—	—	602	—	747	—	.8	.8	1.5	—
1980[4]														1.5	—

[1] In skeins, wild or tussah, cocoons, and waste. [2] Imports for consumption. [3] Preliminary. [4] Estimate.
Source: Department of Commerce; Textile Organon

Raw Silk Deliveries in the U.S. In Bales (132 Lbs.—60 Kilos)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1968	1,430	1,322	1,242	1,576	1,315	1,277	2,018	1,205	904	1,509	1,456	1,480	16,734
1969	806	1,123	1,843	1,390	1,500	1,646	1,663	943	1,483	1,507	1,296	1,194	16,394
1970	1,209	882	1,046	931	730	406	458	344	390	310	232	141	7,079
1971	247	205	187	277	228	129	192	241	247	355	165	253	2,726
1972	233	184	308	198	141	195	182	445	529	209	229	313	3,166
1973[1]	556	355	450	499	393	119	577	214	71	93	105	246	3,678
1974	124	305	233	277	175	288	269	139	97	302	151	96	2,456
1975	190	188	410	393	394	219	380	219	505	585	225	641	4,349
1976	925	469	689	362	251	579	337	358	422	268	222	159	5,041
1977	352	239	242	212	254	259	322	311	370	424	322	433	3,740
1978	321	394	424	382	397	299	316	341	401	280	468	214	4,237
1979	501	302	687	353	471	418	407	756	492	490	368	518	5,763
1980	312	644	422	507	366	285	257	332	342	365	265	323	4,420
1981	471	380	471										

[1] Includes re-exports from 1973. *Source: International Silk Association*

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Silver

World mine production of silver in 1980 was estimated to be about 1.4 percent below 1979 output, according to preliminary data of the U.S. Bureau of Mines. U.S. mine production of silver in 1980 totaled 29.6 million troy ounces, 22.3 percent less than production in 1979, primarily because of strikes at mining and processing facilities. Silver output in Idaho, which accounted for about 45 percent of U.S. production, was reduced as a result of a strike at the Sunshine Mine, one of the nation's largest silver mines. However, secondary production of silver in the U.S. (from old scrap) increased sharply to around 62 million ounces from 38 million in 1979 as earlier record-high silver prices attracted the recycling of silverware, silver artifacts, and coins.

U.S. consumption of silver in 1980 was about 4 times domestic mine production and about 40 percent of world production. (The U.S. deficit in production was met mainly by secondary recovery—which increased sharply in 1980—existing stocks, and imports.)

Imports of silver for consumption in the U.S. totaled 78.7 million ounces in 1980, or 15 percent less than in 1979. Canada, Mexico, and Peru accounted for 81 percent of total imports in 1980. U.S. exports of silver in 1980 totaled 80.9 million ounces, with the United Kingdom, Canada, Belgium-Luxembourg, and Switzerland taking most of the exports. U.S. trade in silver changed from net imports for consumption of 56.8 million ounces in 1979 to net exports of 2.2 million ounces in 1980.

Net U.S. industrial consumption of silver in 1980 totaled 117.6 million troy ounces, 24.2 percent below 1979 consumption of 157.3 million ounces. The large drop in 1980 U.S. silver consumption was accounted for primarily by reduced usage in sterlingware, photography, contacts and conductors, electroplated ware, catalysts, and brazing alloys and solders. Commemorative objects, jewelry, and batteries recorded increased use. (Coinage use was 0.07 million ounces in 1980 vs. 0.168 million in 1979.) End-use categories of silver consumed in 1980 approximated the following: photography—40 percent; electrical and electronic components—27 percent; sterlingware and electroplated ware—11 percent; brazing alloys and solder—7 percent; others—15 percent.

Industry and trading stocks at yearend totaled about 158.0 million ounces. The Chicago Board of Trade warehouses held about 29% of these stocks, COMEX warehouses about 52%, and refiners, fabricators, and dealers, the remainder. Department of Defense stocks totaled about 4.5 million ounces, and Bureau of the Mint stocks, 39 million ounces. The national stockpile contained 139.5 million ounces; the stockpile goal was zero ounces.

The average daily price of silver, quoted by Handy & Harman, New York, reached an alltime high of $48.00 per ounce in January 1980, then plunged sharply to $11.10 per ounce at the end of March, influenced by forced liquidation of a portion of the holdings of a major investor to meet margin calls. The price then recovered only moderately later, ending the year at $15.65 per ounce. However, prices slid to less than $11.00 per ounce in April 1981.

Futures Markets

Silver futures are traded on the Commodity Exchange, Inc. of New York (COMEX), the Chicago Board of Trade, the MidAmerica Commodity Exchange, and the London Metal Exchange (LME). Trading in a silver futures contract was initiated on the Winnipeg Commodity Exchange in February 1981.

World Production of Silver, by Selected Countries In Millions of Fine Ounces (Troy Ounces)

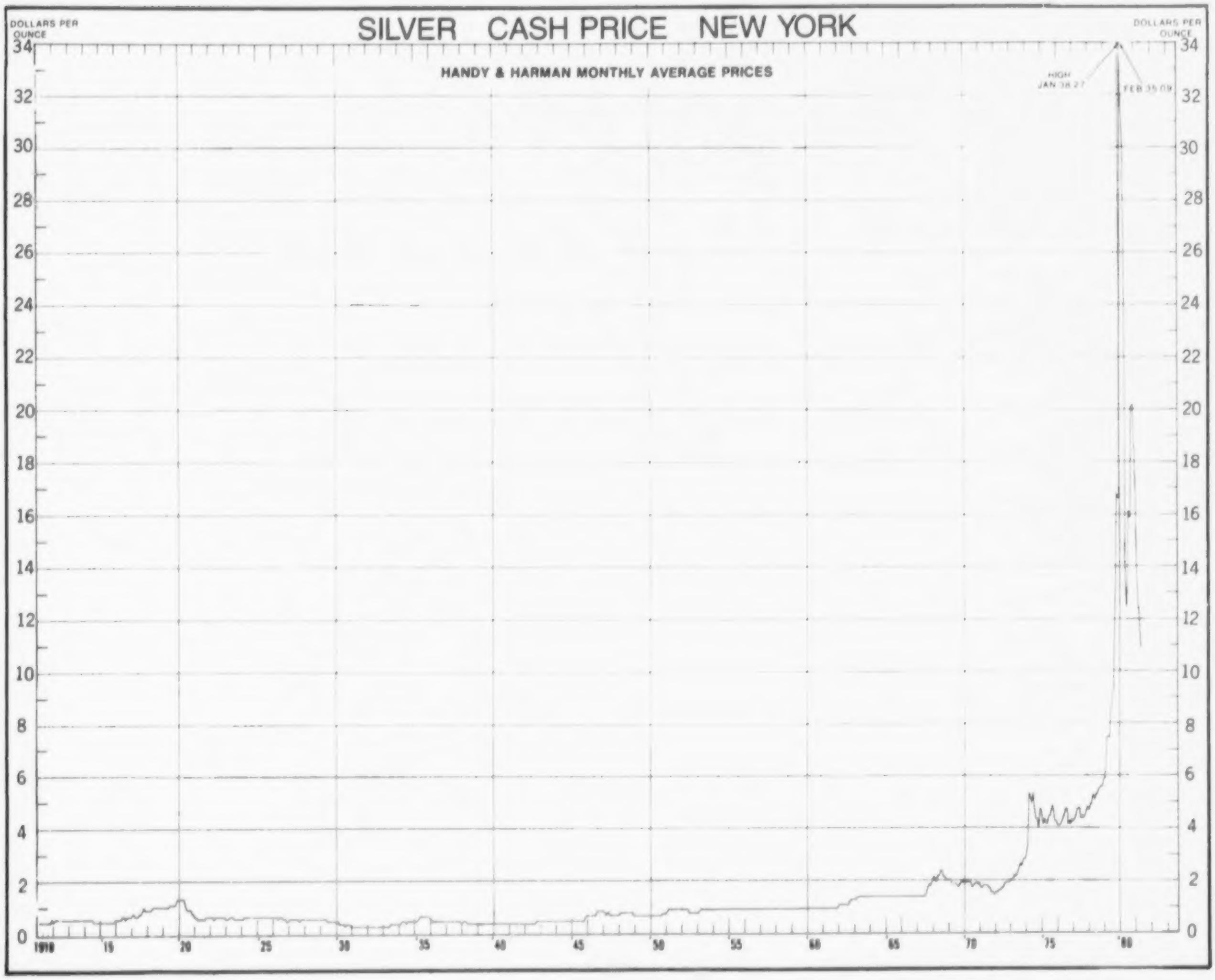
Year	Poland	Argentina	Australia	Zaire (Congo)	Bolivia[1]	Canada	Morocco	W. Germany	Honduras	USSR[2]	Japan	Mexico	Peru	United States	Yugoslavia	World Total[3]
1968		2.42	21.39	2.14	5.18	45.01	.92	1.77	4.40	35.0	10.69	40.03	36.36	32.73	3.02	275.3
1969		3.11	24.46	1.90	6.01	43.53	.86	1.68	3.91	37.0	10.81	42.90	35.89	41.91	3.82	295.7
1970		2.05	25.99	1.71	6.82	44.25	.68	1.80	3.82	38.0	10.80	42.84	39.84	45.01	3.42	303.9
1971		3.18	21.70	1.47	5.37	46.02	2.94	1.80	3.64	39.0	11.29	36.66	38.40	41.56	3.35	294.7
1972		3.27	21.89	2.08	5.58	44.79	3.38	1.74	3.60	40.0	10.05	37.48	40.19	37.23	3.58	301.5
1973		2.44	22.42	2.00	5.80	47.49	3.38	1.45	3.15	41.0	8.55	38.79	42.02	37.83	4.30	307.9
1974	5.8	3.10	21.54	1.65	5.39	42.81	3.06	1.24	3.66	42.0	7.31	37.55	34.89	33.76	4.70	292.2
1975	13.2	2.28	23.35	2.29	5.47	39.70	3.04	1.08	3.80	43.0	8.73	38.03	37.53	34.94	5.41	303.0
1976	17.8	2.25	25.03	2.47	5.09	41.20	2.05	1.03	3.18	44.0	9.30	42.64	35.58	34.33	4.63	316.3
1977	20.7	2.45	27.53	2.73	6.25	42.24	2.24	1.06	2.82	45.0	9.65	47.03	39.09	38.17	4.68	340.2
1978[3]	21.9	2.60	24.93	4.39	6.44	40.73	2.32	.80	2.79	46.0	9.65	50.78	37.05	39.39	5.11	344.7
1979[3]	23.0	2.60	25.0	2.50	5.74	38.07	2.42	.80	3.00	46.0	8.67	49.31	43.42	38.06	5.21	344.5
1980[2]						40.00						50.0	40.0	32.0		340.0

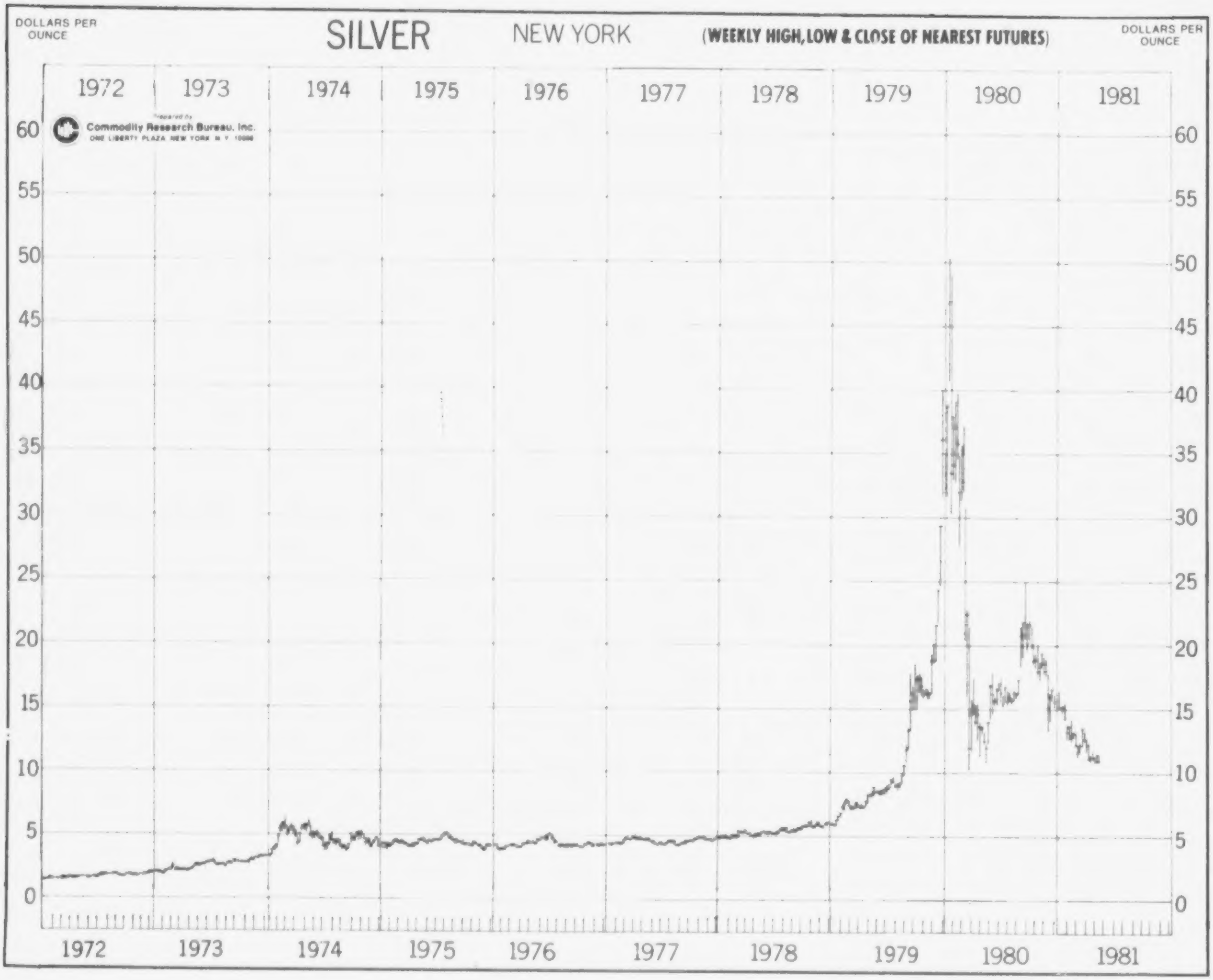
[1] **Exports.** [2] **Estimate.** [3] **Preliminary.** ***Source: Bureau of Mines***

Average Price of Silver in New York In Cents per Troy Ounce (.999 Fine)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1968	199.0	185.5	218.1	220.3	237.7	246.4	231.4	219.5	220.9	197.3	201.8	195.9	214.5
1969	197.9	184.0	182.6	177.8	176.1	164.6	161.8	165.3	178.6	187.3	192.3	180.7	179.1
1970	187.7	189.6	188.9	185.3	167.0	163.9	168.7	179.8	180.2	174.6	176.0	163.5	177.1
1971	164.0	160.0	166.9	172.6	166.7	160.8	158.1	158.7	142.1	133.6	132.0	139.4	154.6
1972	147.3	150.4	153.6	157.2	158.3	156.9	173.6	184.6	177.7	181.1	183.3	197.6	168.5
1973	201.7	223.6	230.9	220.7	240.1	262.1	270.6	263.7	267.5	288.6	286.0	313.7	256.0
1974	363.7	535.9	532.6	503.6	543.2	489.6	441.6	443.1	404.9	483.0	469.4	439.1	470.8
1975	419.3	437.0	434.5	420.9	453.8	448.9	470.5	492.5	451.6	432.9	433.2	408.5	442.0
1976	406.3	408.6	418.9	435.1	448.9	481.2	478.0	423.7	429.5	422.5	437.3	434.7	435.4
1977	440.9	452.7	484.2	477.7	469.2	444.3	449.8	444.4	453.9	476.3	482.8	470.6	462.3
1978	493.4	493.6	526.8	511.6	512.0	531.6	533.1	549.5	557.5	591.8	586.5	593.0	540.0
1979	625.5	741.7	745.4	749.3	836.6	853.8	913.5	933.4	1,395.9	1,678.1	1,655.3	2,179.3	1,109.0
1980	3,827.2	3,508.5	2,413.3	1,450.0	1,253.3	1,574.8	1,606.0	1,589.7	2,014.4	2,018.1	1,864.8	1,639.3	2,063.3
1981	1,475.2	1,306.5	1,236.9	1,091.7									

Source: Handy & Harman





Highest and Lowest Prices of December Silver Futures at New York (Comex) In Dollars per Ounce

Year of Delivery		Yr. Prior to Delivery			Delivery Year												Life of Delivery Range
		Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
1978	High	5.292	5.377	5.166	5.425	5.43	5.877	5.752	5.668	5.718	5.823	5.863	5.795	6.40	6.11	6.02	6.400
	Low	5.022	5.01	4.95	5.16	5.135	5.25	5.10	5.174	5.392	5.325	5.43	5.506	5.71	5.645	5.80	4.715
	Close	5.251	5.134	5.143	5.33	5.29	5.775	5.219	5.621	5.40	5.817	5.597	5.715	6.215	6.00	5.986	—
1979	High	6.94	6.558	6.538	7.16	8.405	8.23	8.363	9.36	9.235	9.975	10.935	16.90	18.13	19.40	25.75	25.750
	Low	6.296	6.205	6.26	6.36	6.99	7.453	7.625	8.31	8.64	8.842	8.985	11.15	15.91	15.85	18.65	5.585
	Close	6.758	6.465	6.514	7.089	8.14	7.839	8.363	9.091	8.96	9.293	10.86	16.80	16.79	18.82	25.50	—
1980	High	19.55	20.528	30.91	44.37	42.15	39.78	20.27	14.75	20.20	20.09	17.14	24.18	22.28	20.32	19.02	44.370
	Low	16.79	17.54	20.705	31.91	35.20	21.27	13.86	11.45	16.975	17.57	15.90	16.67	18.54	17.58	13.37	7.564
	Close	18.395	20.528	30.91	37.645	38.64	21.27	13.86	14.53	19.24	17.84	16.84	21.25	19.10	18.59	16.61	—
1981	High	26.00	23.525	22.615	18.80	15.90	14.67	13.58									
	Low	22.12	20.875	17.19	14.60	13.75	12.80	11.90									
	Close	22.54	22.015	18.19	15.165	13.72	13.135	12.205									

Source: Commodity Exchange Inc., of N.Y. (COMEX)

World[2] Silver Consumption In Millions of Troy Ounces

	Industrial Uses									Coinage							
Year	Canada	France	W. Germany	India	Italy	Japan	Un. Kingdom	United States	World Total	Canada	France	W. Germany	Austria	Mexico	United States	World Total	World Total
1968	5.1	18.0	50.0	16.0	22.5	36.2	23.0	145.0	350.8	9.9	2.9	4.3	2.2		37.0	89.3	440.1
1969	5.7	19.3	50.0	16.0	29.0	41.5	24.5	141.5	350.6	—	.6	5.0	3.3		19.4	40.0	390.6
1970	6.0	15.5	48.2	16.0	32.0	46.0	25.0	128.4	338.9	—	3.7	7.3	4.1		.7	26.9	365.8
1971	6.0	15.6	59.9	16.0	30.5	46.5	25.0	129.1	351.4	.2	.4	19.2	3.2		2.5	28.3	379.7
1972	7.4	16.5	60.0	13.0	32.0	54.3	27.0	151.7	388.9	.1	.3	22.6	5.8		2.3	38.4	427.3
1973	8.6	14.3	64.7	13.0	41.5	69.0	31.0	195.9	477.3	1.4	.1	9.5	6.6		.9	29.2	507.0
1974	9.6	15.5	59.9	15.0	38.6	46.5	25.0	177.0	409.4	8.9	.1	8.8	5.6		1.0	27.9	436.9
1975	10.6	21.2	38.9	13.0	28.9	46.4	28.0	157.7	376.8	10.4	5.2	4.3	13.4	—	2.7	38.8	415.6
1976	9.5	19.0	50.8	18.0	32.1	60.7	28.0	170.5	437.5	8.4	6.7	2.9	6.9	—	1.3	29.7	467.2
1977	8.8	20.6	59.5	17.6	33.8	63.2	32.2	153.6	433.6	.3	6.9	2.6	3.0	4.2	.4	23.4	457.0
1978	9.0	22.2	26.4	20.0	41.8	64.8	29.0	160.2	442.6	.3	11.1	3.6	3.5	6.3	.1	36.3	473.9
1979	8.1	21.5	37.1	19.0	33.0	68.7	26.5	157.2	419.8	.3	7.7	3.7	5.0	5.0	.1	27.8	447.6
1980[1]	6.8	20.2	29.1	16.0	24.5	61.7	20.5	119.7	340.2	.2	—	—	4.3	5.1	.1	15.7	355.9
1981																	

[1] Preliminary. [2] Non-communist areas only. *Source: Handy & Harman*

U.S. Consumption of Silver, by End Use In Thousands of Troy Ounces

						Electrical & Electronic Products									
Year	Bearings	Brazing Alloys & Solders	Catalysts	Dental & Medical	Electroplated Ware	Batteries	Contacts & Conductors	Jewelry	Mirrors	Photographic Materials	Sterling Ware	Coins, Medallions[2]	Total Net Industrial Consumption	Coinage	Total Consumption
1968	451	15,124	2,310	3,094	15,279	5,764	25,805	4,538	1,744	41,607	28,349	1,228	145,293	36,833	182,126
1969	481	16,549	4,081	1,591	12,706	3,799	34,555	3,011	1,510	41,380	20,291	1,592	141,546	19,408	160,594
1970	383	14,035	1,999	1,804	11,437	6,342	25,183	5,119	1,386	38,044	19,115	3,556	128,404	709	129,113
1971	355	12,085	1,730	1,485	10,909	5,631	27,954	3,447	1,112	36,073	22,729	5,636	129,146	2,474	131,620
1972	344	12,214	3,430	1,991	12,716	6,044	36,434	4,870	1,225	38,251	27,163	6,381	151,063	2,284	153,347
1973	375	17,736	5,988	3,022	14,542	4,155	40,209	5,778	2,579	51,979	40,100	9,477	195,941	920	196,861
1974	416	14,514	7,293	2,401	13,179	4,195	31,218	5,235	3,947	49,579	22,147	22,272	177,015	1,017	178,031
1975	458	13,582	8,785	1,503	8,717	4,253	27,211	12,734	3,150	46,074	23,717	7,186	157,650	2,740	160,390
1976	273	11,198	12,267	1,942	9,534	3,490	32,329	10,995	4,622	55,350	19,815	8,240	170,559	1,315	171,874
1977	523	12,362	8,883	2,232	6,844	5,783	31,316	8,059	2,131	53,679	16,690	4,252	153,613	91	153,704
1978	373	10,987	8,197	2,033	7,274	6,029	30,756	6,766	1,862	64,299	17,908	2,727	160,165	45	160,210
1979[1]	332	10,912	5,637	2,295	8,065	4,583	33,506	5,358	1,850	65,978	13,088	4,676	157,258	168	157,426
1980[3]	200	8,900	4,000	1,900	4,200	6,400	25,900	5,000	600	49,300	8,100	4,200	119,700	100	119,800
1981															

[1] Preliminary. [2] Includes commemorative objects. [3] Estimate. *Source: Bureau of Mines*

U.S. Mine Production of Recoverable Silver In Thousands of Troy Ounces

Year	Arizona	California	Colorado	Idaho	Michigan	Missouri	Montana	Nevada	New Mexico	New York	Tennessee	So. Dakota	Utah	Other States	Total
1968	4,958	598	1,646	15,959	473	341	2,133	645	225	28	90	138	5,121	372	32,729
1969	6,141	492	2,599	18,930	1,009	1,442	3,429	884	466	32	79	124	5,954	320	41,906
1970	7,330	451	2,933	19,115	892	1,817	4,304	718	782	24	95	120	6,030	393	45,006
1971	6,170	444	3,390	19,140	670	1,661	2,748	601	782	18	131	107	5,294		41,564
1972	6,653	176	3,664	14,251	785	1,972	3,325	595	1,017	25	83	100	4,300		37,233
1973	7,199	56	3,942	13,620	850	2,058	4,350	624	1,111	54	73	72	3,619	197	37,827
1974	6,356	42	2,784	12,436	643	2,387	3,512	872	1,195	64	20	62	3,208	171	33,762
1975	6,286	80	3,366	13,868	632	2,525	2,617	1,609	792	56	54	68	2,822	164	34,938
1976	7,615	57	4,083	11,561	311	2,277	3,279	784	892	49	78	58	3,134	146	34,328
1977	6,828	58	4,663	15,292	335	2,363	3,367	738	918	56	60	69	3,283	125	38,166
1978	6,638	58	3,217	18,379	N.A.	2,056	2,918	804	895	21	N.A.	53	2,885	457	39,385
1979[1]	7,479	64	2,809	17,144	N.A.	2,201	3,302	529	1,350	11	N.A.	58	2,454	653	38,055
1980[2]	5,890	49	2,131	13,670		2,043	1,949	116	1,189			52	2,090	379	29,560
1981															

[1] Preliminary. [2] Forecast. *Source: Bureau of Mines*

SILVER

Commodity Exchange Inc. (COMEX) Warehouse Stocks of Silver In Millions of Ounces

Year	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1974	63.9	63.9	60.6	64.3	69.8	74.9	76.8	72.3	69.6	68.2	68.4	69.6
1975	68.0	69.5	72.6	70.5	73.7	77.2	78.3	80.9	80.2	82.7	82.4	81.7
1976	86.3	84.1	82.8	79.3	77.3	71.8	65.3	58.0	54.6	50.0	49.3	52.3
1977	54.8	56.5	57.2	63.3	65.6	67.0	69.4	70.6	65.2	64.9	60.2	64.5
1978	68.7	70.0	72.3	74.2	73.4	70.8	72.8	73.6	72.4	66.7	64.3	63.0
1979	58.2	52.0	51.8	49.2	50.3	55.5	54.1	48.9	47.3	51.8	60.3	70.2
1980	74.8	76.0	77.8	83.1	84.2	82.3	82.0	81.7	82.6	82.2	87.1	86.1
1981	86.9	86.8	85.4	84.6	85.7							
1982												

Source: Commodity Exchange, Inc.—New York

Month End Total Open Interest of Silver Futures at New York (COMEX) & Chicago
In Thousands of Contracts

	At New York (COMEX)												At Chicago (CBT)			
Year	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1	Jan. 1	Apr. 1	July 1	Oct. 1
1975	123.9	95.2	84.5	88.4	74.7	85.6	84.6	88.9	118.1	140.5	176.5	214.5	118.1	62.2	99.6	124.2
1976	250.3	197.6	176.4	176.7	169.0	168.1	138.4	130.7	138.1	155.7	208.6	287.2	169.8	88.4	121.6	127.5
1977	398.1	338.0	309.5	282.2	234.6	205.8	156.1	130.1	135.6	181.7	211.3	241.7	186.0	156.8	183.5	211.6
1978	287.8	245.4	242.4	226.0	217.8	208.6	196.2	212.6	214.4	239.1	277.5	304.8	275.9	240.2	230.0	235.4
1979	299.5	242.9	218.7	203.5	185.7	170.0	153.3	154.5	156.2	167.3	144.3	133.4	252.8	180.5	166.6	156.7
1980	123.6	77.7	63.4	48.5	27.1	23.8	22.9	25.1	24.5	29.8	35.0	36.0	88.9	23.6	22.9	24.0
1981	32.0	27.6	24.3	25.7	26.1								28.0	21.2		
1982																

Source: Commodity Exchange of N.Y. (COMEX) & Chicago Board of Trade

Volume of Trading in Silver Futures at New York (COMEX) In Thousands of Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	330.0	270.7	391.0	287.5	244.9	247.2	254.1	316.2	192.0	469.0	438.0	381.4	3,822
1979	460.0	388.3	304.6	367.3	545.3	480.5	383.9	404.1	283.1	191.7	178.6	111.1	4,099
1980	167.7	76.2	143.5	94.0	46.6	63.3	45.6	41.8	100.9	92.9	97.1	90.6	1,060
1981	70.7	71.0	74.9	72.6									
1982													

Source: Commodity Exchange of N.Y. (COMEX)

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Commodity Research Bureau, Inc.
ONE LIBERTY PLAZA • NEW YORK, N. Y. 10006

United States Production[1] of Refined Silver from All Sources In Thousands of Troy Ounces

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1968	956	1,807	1,313	3,015	4,457	6,587	6,586	7,483	6,977	9,030	7,561	8,998	56,770
1969	8,666	7,566	9,642	9,358	8,579	7,872	7,320	6,181	5,966	7,204	6,172	6,747	80,273
1970	6,243	7,029	7,025	7,861	7,453	6,077	6,096	5,450	4,997	5,947	5,837	6,724	76,739
1971	4,937	6,365	8,456	6,436	7,014	6,042	1,333	1,776	4,881	6,596	6,580	5,738	66,155
1972	6,128	6,612	5,944	6,818	6,020	5,339	6,632	6,601	7,024	6,529	5,105	5,767	74,519
1973[2]	55,975				12,406	12,633	11,650	13,841	12,235	15,535	13,541	13,949	161,765
1974	14,476	13,483	17,322	17,147	19,300	18,550	9,679	12,455	14,050	14,019	16,148	19,890	186,519
1975	16,815	14,623	14,619	13,693	12,281	12,267	12,090	12,996	13,222	13,832	12,372	14,251	161,568
1976	9,369	11,558	14,260	14,155	10,952	12,633	8,771	10,342	12,598	13,998	16,018	18,378	154,230
1977	13,196	10,114	13,173	13,335	13,260	14,100	5,781	7,840	10,412	13,643	13,002	14,966	143,125
1978	10,694	12,699	12,503	10,871	12,196	12,000	10,186	12,214	10,727	12,666	11,526	12,721	141,003
1979	10,592	10,888	13,070	11,451	11,938	11,600	12,433	9,837	9,118	12,476	12,221	17,008	155,723
1980	18,088	17,548	17,673	16,941		14,800	6,676	11,583	10,785	10,603	10,578	14,553	166,326
1981	12,889	12,000	11,352										

[1] Output of commercial bars .999 fine, including U.S. Mint purchases of crude. Production is from both foreign and domestic silver. [2] Data beginning 1973 are for production from all sources. (Primary, Coins, old & new scrap). The total for 1972 was 178,665,000 oz. *Sources: American Bureau of Metal Statistics; The Silver Institute, Inc.*

Value of United States Exports of Silver (Excludes Silver Coin) In Millions of Dollars

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1970	8.6	10.4	5.8	3.4	4.4	1.8	1.3	2.9	1.9	1.1	1.3	5.9	27.6
1971	4.2	2.0	3.3	2.7	1.5	1.3	.9	.7	1.6	.2	.2	1.4	19.5
1972	.9	1.5	10.6	.6	2.9	1.2	16.3	9.0	.8	1.5	1.6	2.3	31.6
1973	.6	.4	2.0	.9	1.7	.9	5.6	4.6	3.3	1.9	1.6	1.1	27.6
1974	1.1	2.4	10.4	2.9	13.2	14.4	5.8	8.7	1.6	5.3	8.2	7.7	81.7
1975	20.3	10.0	23.6	11.2	12.0	5.0	37.8	9.5	5.0	4.8	5.2	3.8	132.6
1976	2.9	4.3	11.5	5.0	4.6	3.3	6.6	4.9	7.3	2.6	2.9	5.3	61.4
1977	5.4	7.0	3.6	6.7	4.6	4.6	14.6	7.8	10.7	4.6	.5	14.7	84.6
1978	8.8	10.7	7.9	13.7	5.8	6.2	6.1	12.5	18.3	12.5	8.4	5.5	119.1
1979	8.9	15.3	11.2	6.4	12.5	13.9	10.7	7.9	32.1	78.7	166.7	100.2	471.2
1980	298.4	345.3	253.4	489.0	82.0	140.5	57.5	65.5	29.0	33.5	40.9	74.6	1,909.7
1981	56.6												

Source: Department of Commerce

Value of United States Imports of Silver (Excludes Silver Coin) In Millions of Dollars

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1970	5.9	5.6	7.6	8.0	4.3	4.6	3.7	6.7	5.3	4.4	3.8	4.9	65.0
1971	5.3	2.7	5.2	5.9	2.9	3.8	3.6	4.7	4.1	3.2	4.2	3.9	49.5
1972	5.3	4.7	5.3	3.5	6.4	3.4	6.0	3.0	5.4	5.9	5.7	4.8	59.4
1973	8.3	7.0	8.7	6.8	7.5	15.2	33.0	27.6	30.8	22.2	66.4	32.2	268.6
1974	13.5	20.5	67.4	58.5	39.1	47.3	69.1	30.5	31.3	37.9	43.8	42.6	501.5
1975	22.1	26.1	36.2	28.6	31.4	28.4	22.1	25.2	28.0	33.0	18.3	31.1	330.6
1976	28.0	18.6	27.6	17.7	15.8	29.8	22.5	52.1	22.9	23.2	31.5	38.8	325.3
1977	36.5	23.7	41.9	31.2	25.8	30.2	17.9	31.3	31.8	26.4	32.7	25.6	354.8
1978	136.4	82.4	210.9	164.6	29.9	33.2	32.2	33.1	30.6	35.7	30.0	30.6	389.0
1979	32.2	38.7	95.5	29.1	61.6	50.1	52.8	43.8	78.0	202.2	120.8	155.6	961.8
1980	258.5	174.3	195.9	91.5	63.9	108.3	99.0	86.0	135.0	129.5	138.1	122.7	1,602.7
1981	133.0												

Source: Department of Commerce

Soybean Meal

The USDA, in April 1981, projected U.S. soybean meal supplies for the 1980/81 marketing year ending September 30, 1981 at 25.32 million short tons, 7 percent below 1979/80 supply.

Domestic use of soybean meal in the 1980/81 season was projected by the USDA at 18.35 million tons, 5 percent below 1979/80. Lower hog production, and relatively high protein meal prices led to reduced feeding of soybean meal, despite increased poultry numbers.

U.S. exports of soybean meal during the 1980/81 season were projected by the USDA at 6.70 million tons, down 15 percent from the previous season. U.S. soybean meal exports in the October 1980–mid April 1981 period were below those for the same period the previous season. With the harvest of a record near 16.0 million tonne 1981 Brazilian soybean crop, competition from Brazil, which is the world's largest exporter of soybean meal, was expected to further curb U.S. soybean exports to some extent in the spring and summer of 1981. Over half of U.S. soybean meal exports are to the European Economic Community, with Japan, Eastern Europe, and Mexico also important purchasers.

The USDA, in March 1981, projected 1980/81 potential world protein meal production at 87.19 million tonnes (44 percent protein equivalent). Production of this amount would be 9 percent below the estimated 1979/80 equivalent of 96.04 million tonnes. (USDA world production estimates for oilseeds are calculated from assumed extraction rates applied to that portion of each crop considered available for crushing and/or export—not actual production.) Most of the impact of the lower world oilseed harvest was in the protein meal sector because 1979/80 world production of soybeans, with their relatively high protein and low oil content, declined so sharply.

Major growth areas for soybean meal consumption were expected to be the U.S., Brazil, Eastern Europe, Mexico, and China.

Futures Market

Soybean meal futures in the United States are traded on the Chicago Board of Trade.

Supply and Distribution of Soybean Meal in the United States In Thousands of Short Tons

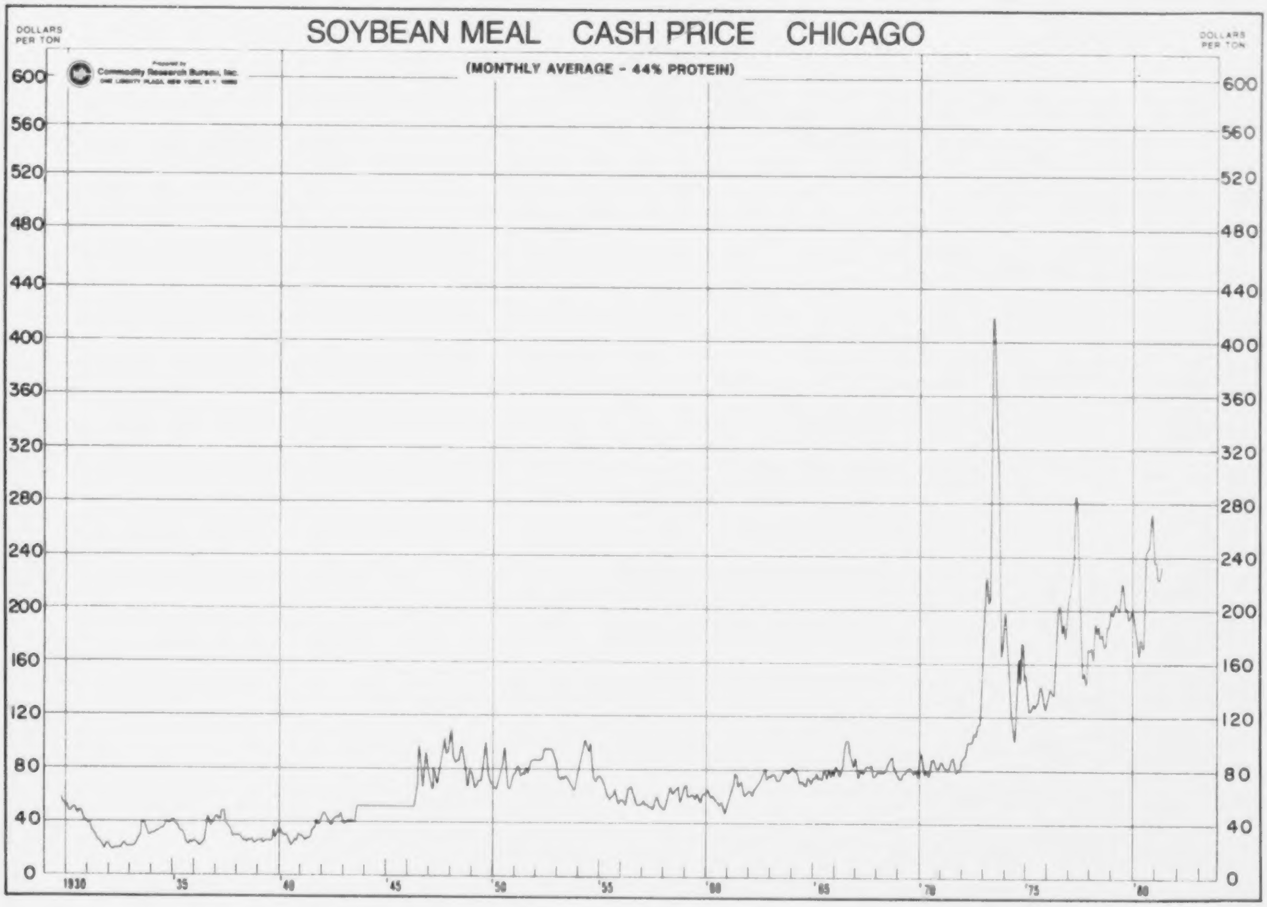
Year Begin. Oct.	Supply					Distribution				Price Per Ton Bulk, Decatur	
	For Stocks Oct. 1	Production			Total	(Domestic) Feed[2]	Exports	Shipments to U.S. Terr.	Total	44% Protein	49 or 50% Protein
		Total	For Animal Feed	For Edible Protein Pdt's.							
1969–0	157	17,596			17,753	13,514	4,035	67	17,616	78.45	86.61
1970–1	137	18,035			18,172	13,406	4,559	61	18,126	78.51	84.33
1971–2	146	17,024			17,170	13,110	3,805	63	16,978	90.20	98.20
1972–3	192	16,709			16,900	11,920	4,745	52	16,717	228.99	253.42
1973–4	183	19,674	N.A.	N.A.	19,858	13,766	5,548	36	19,350	146.35	160.57
1974–5	507	16,701	16,437	265	17,209	12,501	4,299	50	16,850	130.86	141.26
1975–6	358	20,754	20,395	359	21,112	15,552	5,145	61	20,758	147.77	157.68
1976–7	355	18,488	18,101	388	18,843	14,001	4,559	55	18,615	199.80	218.73
1977–8	228	22,371	21,961	410	22,599	16,209	6,080	67	22,356	164.20	179.45
1978–9	243	24,354	23,986	368	24,597	17,645	6,610	75	24,330	190.10	206.30
1979–0[1]	267	27,105	26,808	297	27,372	18,915	7,908	85	27,146	181.90	
1980–1[3]	226	25,094			25,320	18,900	6,700		25,050	225.00	

[1] Preliminary. [2] Includes small quantities used for industrial purposes, estimated at 30,000 tons annually. [3] Estimate.
Source: Economic Research Service, U.S.D.A.

U.S. Exports of Soybean Cake & Meal by Country of Destination In Thousands of Metric Tons[2]

Year Begin. Oct. 1	Belgium Luxembourg	Japan	Canada	Denmark	France	W. Germany	Spain	Ireland	Italy	Netherlands	Philippines	Poland	United Kingdom	Yugoslavia	Grand Total
1969–0	219.0	40.3	270.9	32.5	622.8	855.9		60.4	309.5	659.0	49.1	109.9	42.9	173.8	4,035
1970–1	308.8	32.8	242.1	85.6	712.1	987.4		36.5	330.8	675.4	53.8	112.3	100.1	186.8	4,559
1971–2	328.4	24.5	204.5	95.5	610.3	705.0		72.4	295.6	482.8	58.0	65.8	58.3	116.2	3,805
1972–3	179.8	287.0	199.2	114.3	678.5	987.7	140.0	76.3	445.0	248.4	14.2	337.0	48.5	152.2	4,745
1973–4	204.7	137.2	289.8	56.6	866.6	1,192	96.0	53.3	631.6	313.3	49.9	287.6	60.2	316.4	5,548
1974–5	243.8	.1	224.5	17.6	786.7	995.4	69.0	37.3	422.2	428.7	12.6	220.6	91.4	—	4,299
1975–6[2]	238.2	120.1	277.8	35.1	761.9	1,008	347.3	49.1	421.4	102.5	.1	360.8	54.5	183.5	4,667
1976–7	83.4	217.5	256.4	36.8	131.0	953.1	143.3	36.1	428.8	565.8	—	256.9	46.7	95.2	4,117
1977–8	37.0	271.3	339.5	26.1	146.6	1,004	237.3	83.6	741.6	654.7	21.0	493.3	65.0	113.1	5,515
1978–9	3.8	204.5	414.0	65.6	355.1	717.6	253.5	117.9	691.1	748.1	—	243.0	66.8	57.9	5,996
1979–0[1]															7,174
1980–1[1]															6,078

[1] Preliminary. [2] Data prior to 1975–6 are in THOUSANDS OF SHORT TONS. *Source: The Bureau of the Census, U.S.D. of Commerce*



Average Price of Soybean Meal (44% Protein) at Chicago In Dollars per Ton (Bagged)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1970	92.50	90.25	76.80	79.60	76.20	79.90	88.10	89.20	86.00	82.40	83.20	87.40	84.35
1971	85.60	82.60	82.40	80.25	84.25	87.50	90.25	84.75	79.25	80.75	79.80	86.60	83.67
1972	88.60	91.00	97.00	100.60	101.40	101.20	107.50	107.10	113.90	114.90	129.40	180.60	111.09
1973	195.00	225.30	206.50	209.80	321.20	418.90	317.80	291.60	214.70	166.20	173.80	198.80	244.97
1974	178.80	166.80	154.20	124.30	116.30	107.10	145.80	164.00	146.00	176.00	148.80	151.20	148.28
1975	137.00	125.00	125.60	129.90	128.30	129.20	132.30	143.40	143.00	135.30	126.90	134.60	132.54
1976	137.75	141.75	137.50	136.60	162.10	198.10	204.10	183.50	189.60	179.80	191.40	207.80	172.42
1977	217.20	221.20	236.40	285.80	268.40	235.50	172.50	150.90	154.25	145.40	172.30	170.70	202.55
1978	173.10	164.00	190.50	184.10	188.50	180.80	183.10	174.10	175.40	188.40	188.70	200.40	182.59
1979	196.50	202.40	306.20	202.80	199.70	221.40	213.60	201.00	200.70	193.50	195.20	200.10	202.76
1980	192.40	186.50	176.90	166.60	178.90	173.40	200.40	220.10	247.20	259.10	274.10	236.40	209.33
1981	236.20	225.30	223.40										

Source: Consumer Marketing Service, U.S.D.A.

SOYBEAN MEAL

Production & Foreign Trade of Soybean Cake & Meal in the U.S. In Thousands of Short Tons

Crop Year	Production													Soybeans
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Total	(Meal Equivalent of Exports)[2]
1969–0	1,416	1,419	1,454	1,432	1,346	1,445	1,437	1,549	1,462	1,441	1,430	1,238	17,070	10,669
1970–1	1,530	1,508	1,560	1,560	1,387	1,463	1,459	1,465	1,402	1,430	1,474	1,265	17,495	10,286
1971–2	1,406	1,409	1,519	1,507	1,431	1,518	1,387	1,489	1,353	1,384	1,381	1,241	17,024	9,562
1972–3	1,562	1,661	1,618	1,656	1,523	1,507	1,364	1,449	1,226	1,043	1,116	984	16,709	11,208
1973–4	1,465	1,688	1,704	1,757	1,658	1,786	1,647	1,694	1,630	1,704	1,654	1,288	19,674	13,170
1974–5	1,467	1,458	1,427	1,484	1,282	1,436	1,368	1,245	1,256	1,408	1,533	1,338	16,702	10,024
1975–6	1,701	1,697	1,808	1,748	1,617	1,820	1,830	1,891	1,772	1,670	1,556	1,645	20,754	13.316
1976–7	1,747	1,763	1,741	1,725	1,709	1,771	1,596	1,454	1,340	1,211	1,187	1,243	18,488	13,200
1977–8	1,781	2,017	2,044	2,007	1,778	2,050	1,903	1,959	1,725	1,681	1,758	1,695	21.629	16,895
1978–9	2,052	2,069	2,222	2,095	1,892	2,052	1,921	1,999	1,910	1,836	1,759	1,766	23,573	17,681
1979–0[1]	2,214	2,359	2,431	2,477	2,319	2,379	2,129	2,167	1,922	1,990	1,945	1,896	26,227	21,118
1980–1[1]	2,253	2,291	2,179	2,133	1,838									

[1] Preliminary. [2] Calculated at 47.5 ibs of meal per bushel. *Source: Economic Research Service, U.S.D.A.; Bureau of Census.*

Stocks (at Oil Mills) of Soybean Cake & Meal in the United States In Thousands of Short Tons

Year	Oct. 1	Nov. 1	Dec. 1	Jan. 1	Feb. 1	Mar. 1	April 1	May 1	June 1	July 1	Aug. 1	Sept. 1
1967–8	110.1	155.1	168.0	199.8	142.7	158.5	196.3	150.8	123.8	151.6	136.0	100.5
1968–9	95.4	111.5	112.5	149.2	174.4	170.5	150.7	151.5	162.3	133.1	140.5	130.7
1969–0	108.5	120.2	139.3	103.2	108.5	128.3	125.4	130.9	201.9	179.3	130.2	170.8
1970–1	137.0	168.8	182.7	129.7	185.5	189.3	153.2	168.1	219.3	169.1	215.0	215.4
1971–2	145.8	205.2	192.8	144.3	153.9	135.5	160.5	218.0	186.7	189.1	243.2	221.6
1972–3	191.7	185.7	170.7	217.9	193.3	210.0	206.3	213.5	203.4	204.5	214.4	212.8
1973–4	183.2	234.3	242.2	284.6	249.0	281.1	361.6	348.0	427.9	514.3	475.9	535.4
1974–5	507.3	508.2	563.7	529.0	541.0	540.0	556.7	470.5	448.1	421.7	394.8	404.5
1975–6	358.3	396.1	441.4	371.4	378.1	419.5	358.3	358.8	462.8	369.8	406.9	350.5
1976–7	354.9	423.5	427.7	353.9	384.7	429.9	412.6	449.0	408.3	390.7	399.0	270.4
1977–8	228.3	270.0	239.8	245.1	251.7	239.7	227.3	308.2	263.3	191.1	262.6	234.1
1978–9	242.9	210.4	178.2	260.5	215.1	198.4	210.4	231.6	207.4	205.3	232.2	140.3
1979–0[1]	224.3	204.1	164.2	207.7	158.7	160.6	219.1	193.9	265.0	262.0	232.4	225.1
1980–1[1]	189.7	211.1	350.0	221.8	209.7	214.4						
1981–2												

[1] Preliminary. *Source: Economic Research Service, U.S.D.A.; Bureau of the Census*

Month End Open Interest of Soybean Meal Futures at the Chicago Board of of Trade In Contracts

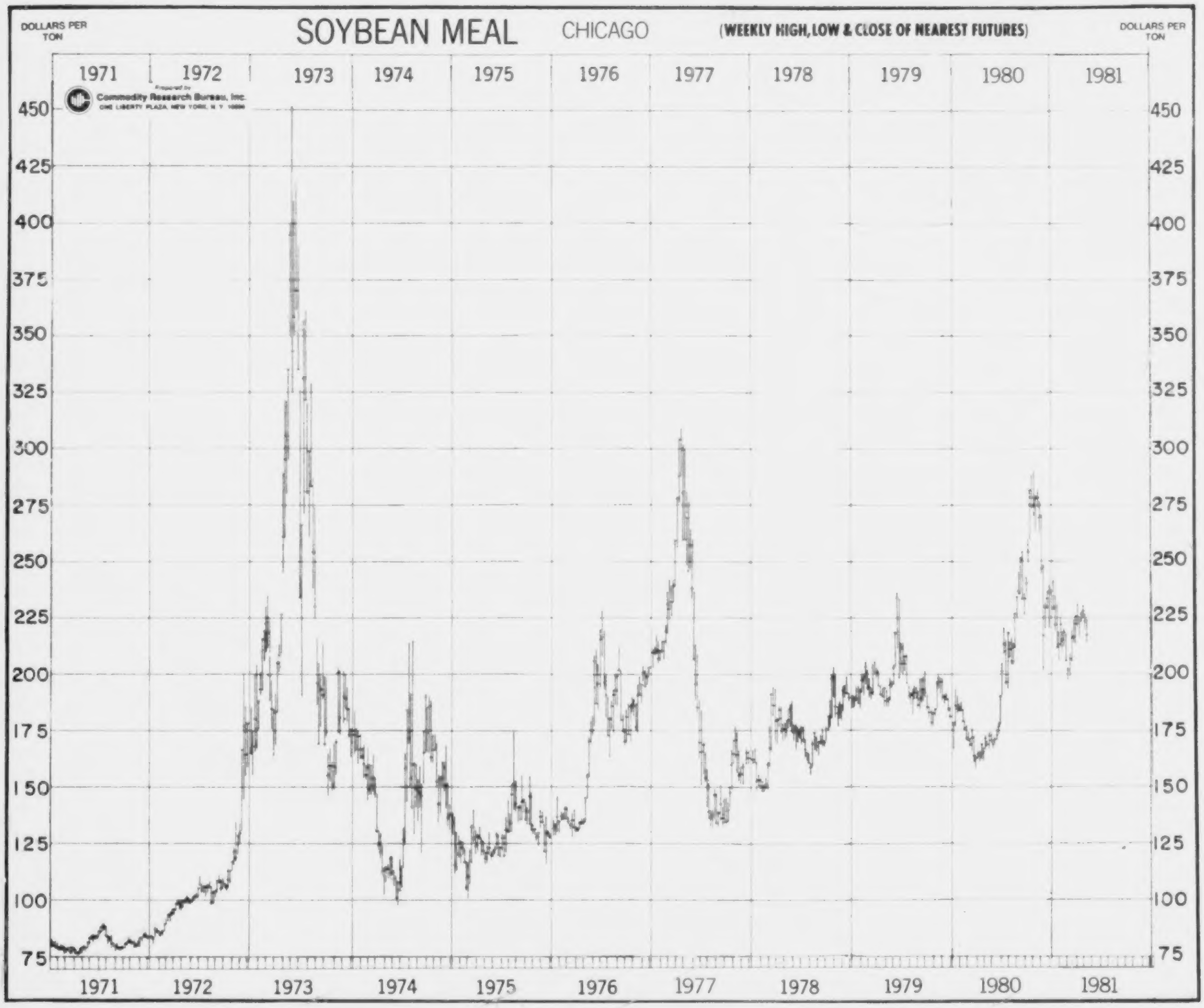
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	30,042	34,991	42,325	40,969	50,633	50,628	52,895	56,288	52,315	60.233	63,302	61,014
1979	48,076	54,316	54,873	48,923	49,678	56,627	47,847	47,804	49,348	56,178	52,426	50,072
1980	49,490	53,379	51,143	47,016	46,603	47,769	50,797	61,261	66,805	82,421	84,051	64,965
1981	53,077	50,584	47,002	51,831								
1982												

Source: Chicago Board of Trade

Volume of Trading of Soybean Meal Futures at the Chicago Board of Trade In Thousands of Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	173.1	123.6	275.5	213.6	190.2	224.5	191.3	207.3	162.2	257.3	260.2	214.2	2,493
1979	204.7	244.5	290.3	219.4	211.2	382.2	257.9	182.6	186.3	219.6	183.3	146.8	2,648
1980	172.6	159.2	152.1	183.0	159.1	183.9	370.8	281.5	371.9	413.6	369.3	401.7	3,219
1981	261.9	203.1	220.9	254.3									

Source: Chicago Board of Trade



High, Low & Closing Prices of May Soybean Meal Futures on the Chicago Board of Trade

In Dollars per Ton

Year of Delivery		Year Prior to Delivery										Delivery Year					Life of Delivery Range
		Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	
1978	High	207.0	209.0	207.5	216.5	181.0	161.5	161.8	162.3	181.0	170.5	169.2	158.5	194.5	186.0	182.3	216.5
	Low	188.5	185.0	190.0	183.0	158.0	143.6	143.5	147.5	161.0	158.6	153.2	152.1	155.0	169.1	172.3	143.5
	Close	196.0	195.0	203.5	189.0	158.0	147.8	151.3	162.1	163.1	166.7	153.6	154.1	178.7	176.0	179.0	—
1979	High	—	180.0	182.0	181.0	172.0	178.5	183.0	202.0	197.0	193.9	195.5	209.5	205.5	202.7	194.0	209.5
	Low	—	168.0	167.0	168.0	165.0	165.1	172.5	179.0	179.7	184.0	184.5	190.5	193.7	186.5	185.8	165.0
	Close	—	169.0	181.2	173.2	167.7	175.8	178.5	197.0	187.0	188.3	192.2	203.2	202.2	186.9	188.9	—
1980	High	—	201.0	204.0	233.0	221.0	205.5	211.3	213.0	204.5	201.2	197.5	193.0	182.0	169.0	173.0	233.0
	Low	—	195.7	197.5	202.0	196.0	194.5	197.5	188.5	189.3	189.6	179.9	179.0	160.7	158.1	163.3	158.1
	Close	—	200.0	203.7	202.5	198.7	203.0	207.0	192.7	199.9	189.7	190.3	179.4	161.4	163.9	168.0	—
1981	High	206.5	200.5	201.0	205.0	238.0	242.5	265.0	299.0	300.5	294.8	259.5	232.5	224.0	231.7		
	Low	193.0	191.0	191.5	190.3	205.0	217.0	241.0	244.3	275.0	220.7	213.7	214.5	205.2	216.9		
	Close	195.2	195.5	192.0	205.0	229.6	242.5	251.7	290.2	292.7	249.0	220.7	215.2	220.8	226.9		
1982	High	—	261.5														
	Low	—	248.5														
	Close	—	249.5														

Source: Chicago Board of Trade

Soybean Oil

The U.S. soybean oil supply for the 1980/81 season ending September 30, 1981, was projected by the USDA in March 1981 at about 12.9 billion pounds, slightly up from the previous season's supply. A 1.2 billion "carryin" accounted for much of the increase.

Domestic use of soybean oil was expected by the USDA to total 9.2 billion pounds, up about 3 percent from 1979/80. Domestic consumption of soybean oil now accounts for nearly two-thirds of all food fats and oils, and 80 percent of the edible vegetable oil utilized in the United States.

U.S. exports of soybean oil in 1980/81 were projected at 2.2 billion pounds, nearly 20 percent below the previous season's shipments. China, Colombia, and Peru were important purchasers of U.S. soybean oil in 1980/81. The overall decline in exports reflected less oil programmed for export under Title I PL 480, as well as reduced commercial sales because of higher international stock levels of soybean oil and many other vegetable oils. Also, India, a major importer, was not a substantial buyer of U.S. soybean oil in 1980/81.

The USDA, in March 1981, projected potential 1980/81 world total fats and oils production at 56.71 million tonnes, down 8 percent from the 1979/80 estimate, based on normal crushing rates and oil yields.

The USDA estimate of world supplies of soybean oil was revised slightly downward to 14.3 million tonnes in April 1981 because of a reduced crush in the United States, the EEC, and Japan. Ample exportable supplies of soybean oil existed in most producer/exporter countries, particularly in the United States and Brazil.

Soybean oil prices in 1981 were not expected to show any noticeable increase over the previous year's level. Prices during October–December 1980 averaged 24.8 cents, or 2½ cents below 1979/80 prices for the same period.

Futures Market

Soybean oil futures are traded on the Chicago Board of Trade.

Production, Consumption, Stocks and Foreign Trade of Soybean Oil in the U.S. In Millions of Pounds

Year	Production		Consumption		Stocks December 31		Imports for Consumption	Exports	
	Crude	Refined	In Refining	In End Pdt's.	Crude	Refined		Crude	Refined
1968	6,150	5,228	5,487	5,411	305.4	283.2	—	576.8	364.0
1969	6,805	5,860	6,093	5,948	274.9	242.3	—	542.2	333.6
1970	8,086	6,276	6,523	6,322	450.7	304.9	—	1,119.4	367.6
1971	8,082	6,298	6,551	6,323	447.6	354.6	—	1,288.6	427.5
1972	8,084	6,521	7,032	6,827	581.5	315.0	—	841.6	452.1
1973	7,540	6,509	7,046	6,831	411.7	278.8	—	723.9	243.8
1974	8,705	6,812	7,000	7,039	375.6	299.4	.1	1,607	
1975	7,861	6,423	6,686	6,830	495.3	304.6	—	758	
1976	9,640	7,185	7,476	7,577	1,141	347.1	—	901.7	77.3
1977	8,836	7,790	8,092	7,451	524.0	340.0	.2	1,427.3	81.3
1978	10,625	8,618	8,955	8,175	623.1	347.5	—	1,560.8	77.8
1979[1]	11,504	9,110	9,456	8,656	656.6	373.5	—	2,371	
1980[1]	12,098	8,985	9,300	8,586	1,369.6	368.2		2,316	
1981									

[1] Preliminary. *Source: Bureau of Census*

U.S. Exports of Soybean Oil,[1] by Country of Destination In Thousands of Metric Tons[3]

Year Begin. Oct. 1	Australia	Colombia	Canada	Chile	Ecuador	Haiti	Peru	India	Israel	Mexico	Morocco	Pakistan	Panama	Egypt	Grand Total
1968–9		—	29.0	30.5		19.2	—	327.9	34.2	4.2	28.1	113.8			869.6
1969–0		—	51.0	37.8		19.2	—	247.6	37.7	18.2	52.9	355.0			1,420
1970–1		17	50	58		26	111	284	41	1	90	278			1,742
1971–2		15	43	2		27	84	144	44	—	122	142			1,398
1972–3		7	38	2	30	21	92	95	51	33	7	130	11	2	1,066
1973–4		24	73	69	29	16	135	94	21	135	43	197	39	3	1,435
1974–5		18	44	6	28	26	56	8	15	119	5	26	24	8	1,028
1975–6[3]	13.1	14.2	31.8	1.0	19.5	14.3	14.5	15.8	9.9	3.1	4.9	150.8	13.2	.5	443
1976–7	20.1	27.3	26.0	12.0	16.2	17.2	57.3	252.2	3.1	15.4	3.0	119.2	12.5	1.4	702
1977–8	21.0	44.1	27.7	22.0	26.0	13.8	68.6	247.7	6.3	29.6	5.6	95.8	8.3	6.1	933
1978–9[2]	16.2	84.1	20.9	22.8	22.4	17.2	29.4	181.1	9.8	5.1	6.0	163.3	19.0	13.9	1,059
1979–0[2]															1,220
1980–1[2]															794

[1] Crude & refined oil combined as such. [2] Preliminary. [3] Data prior to 1975–6 are in MILLIONS OF POUNDS. *Source: The Bureau of the Census, U.S.D. of Commerce.*

U.S. Stocks of Soybean Oil (Crude & Refined) at Factory & Warehouses In Millions of Pounds

Year	Oct. 1	Nov. 1	Dec. 1	Jan. 1	Feb. 1	Mar. 1	April 1	May 1	June 1	July 1	Aug. 1	Sept. 1
1968–9	539.9	541.4	562.6	588.6	525.8	517.7	611.0	595.5	623.5	557.2	563.3	552.5
1969–0	415.4	470.7	492.1	517.2	552.0	558.6	560.7	632.3	715.8	651.3	638.3	670.6
1970–1	543.4	562.3	717.6	755.7	751.7	787.8	756.0	765.8	757.9	719.0	745.3	819.2
1971–2	772.6	725.9	808.6	802.2	782.8	847.1	881.2	952.6	944.9	829.6	854.1	841.6
1972–3	785.2	806.2	839.1	896.5	948.6	966.5	920.6	1,005	778.3	822.7	748.8	620.0
1973–4	515.5	531.6	599.9	690.5	623.3	642.5	626.0	726.3	765.1	708.6	702.7	777.1
1974–5	793.6	734.7	681.5	673.6	689.6	633.8	647.4	662.2	606.7	528.6	544.3	567.1
1975–6	560.5	568.0	657.7	799.9	844.8	913.3	946.0	1,061	1,109	1,275	1,230	1,295
1976–7[1]	1,251	1,351	1,432	1,488	1,600	1,609	1,486	1,479	1,355	1,168	1,032	937.3
1977–8[1]	766.6	752.1	766.5	864.0	918.8	861.2	808.3	826.9	833.8	839.3	825.6	777.5
1978–9[1]	728.6	813.4	837.1	970.6	932.2	942.8	1,004	987.3	1,043	922.9	915.4	815.1
1979–0[1]	775.8	819.8	867.3	1,030	1,155	1,205	1,176	1,184	1,145	1,226	1,305	1,263
1980–1[1]	1,210	1,374	1,677	1,738	1,901	1,977						
1981–2												

[1] Preliminary. *Source: Bureau of the Census*

U.S. Production of Refined Soybean Oil In Millions of Pounds

Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Total
1968–9	446.7	439.5	462.4	460.1	448.3	506.4	479.1	466.3	498.7	452.4	459.4	489.3	5,609
1969–0	513.0	526.2	560.8	533.0	509.2	566.4	545.9	505.6	531.9	488.1	516.5	491.9	6,289
1970–1	534.5	514.5	538.8	543.5	511.1	557.9	495.0	506.7	526.7	482.9	532.8	568.6	6,313
1971–2	534.5	504.2	534.1	529.7	527.5	564.2	537.9	562.6	537.0	484.7	557.9	530.3	6,364
1972–3	562.9	565.4	560.7	574.6	522.9	579.4	514.7	542.1	516.6	433.2	544.8	504.6	6,373
1973–4	577.1	601.6	597.3	666.4	596.0	616.1	575.0	581.8	542.4	560.5	583.9	510.8	7,009
1974–5	585.0	511.4	482.1	515.0	468.6	497.1	497.0	467.9	489.6	509.3	550.9	538.3	6,112
1975–6	666.9	617.3	605.0	611.9	558.7	646.5	606.6	624.2	627.1	584.7	607.9	568.1	7,325
1976–7[1]	575.4	596.3	578.0	553.5	567.3	698.7	624.7	639.1	578.1	553.1	648.4	612.0	7,225
1977–8[1]	686.8	764.2	745.0	719.2	665.9	816.9	752.3	746.3	662.5	649.2	725.3	679.9	8,614
1978–9[1]	782.8	747.7	765.7	753.3	681.7	768.9	760.1	835.4	742.8	748.3	762.8	693.0	9,043
1979–0[1]	805.9	797.6	760.3	801.9	760.5	767.7	687.1	712.8	669.0	720.3	760.7	764.5	9,038
1980–1[1]	784.1	760.5	763.1	741.6	706.3								
1981–2													

[1] Preliminary. *Source: Bureau of the Census*

U.S. Production of Crude Soybean Oil In Millions of Pounds

Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Total
1968–9	578.8	584.1	544.6	524.2	474.6	578.5	537.6	582.4	541.2	545.9	526.9	511.8	6,531
1969–0	660.3	657.6	663.7	664.2	626.5	671.3	672.3	724.1	680.3	664.7	655.6	563.8	7,904
1970–1	729.8	705.6	727.7	724.8	653.2	695.9	695.7	696.4	670.9	674.9	692.2	597.5	8,265
1971–2	645.2	644.2	690.6	689.9	658.9	706.4	646.7	698.8	635.4	648.6	645.7	581.0	7,891
1972–3	713.3	742.4	716.6	723.5	676.8	680.8	618.3	655.8	553.1	470.1	510.5	439.8	7,501
1973–4	676.8	764.9	769.8	797.7	751.5	809.0	750.8	777.8	756.7	788.3	759.0	592.3	8,995
1974–5	672.9	627.5	621.4	651.6	555.9	632.4	600.9	557.6	557.8	623.9	674.5	599.8	7,376
1975–6	783.9	776.7	846.7	807.4	757.6	852.4	846.1	869.8	813.9	788.7	720.5	766.1	9,630
1976–7[1]	807.4	804.0	805.7	786.7	791.2	823.7	747.3	682.4	631.1	566.6	553.6	578.2	8,578
1977–8[1]	821.9	922.3	931.5	911.9	809.5	943.3	866.9	908.2	795.1	777.9	815.5	783.3	10,287
1978–9[1]	989.3	974.8	1,050	989.1	902.3	982.2	939.6	964.7	930.5	899.9	856.7	849.9	11,329
1979–0[1]	1,020	1,068	1,102	1,115	1,065	1,098	993.7	1,010	901.6	927.8	913.8	890.1	12,105
1980–1[1]	1,080	1,078	1,024	1,011	887.8	990.9							
1981–2													

[1] Preliminary. *Source: Bureau of the Census*

SOYBEAN OIL

U.S. Exports of Soybean Oil (Crude & Refined) In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1968	30.3	68.4	80.9	41.4	48.0	119.2	46.2	29.7	124.2	67.2	56.4	111.5	823.4
1969	58.9	19.1	18.6	77.1	43.2	120.3	69.6	20.2	90.9	45.3	100.8	97.2	761.1
1970	62.7	46.2	151.7	73.8	81.1	197.8	136.0	126.7	165.2	103.9	52.7	174.6	1,372
1971	112.0	109.3	156.0	168.0	191.8	140.9	189.0	78.1	122.2	143.0	43.5	153.8	1,612
1972	157.8	71.3	59.3	69.3	89.0	263.3	94.1	57.5	68.3	58.4	109.7	50.7	1,149
1973	52.7	120.9	132.3	49.3	111.8	90.3	81.5	37.0	45.2	12.9	31.7	108.6	874.3
1974	122.2	120.2	98.3	146.0	96.9	226.6	239.0	84.1	83.2	85.9	111.1	193.0	1,067
1975	129.0	71.6	116.1	57.6	72.9	55.7	65.3	13.1	13.5	43.8	78.9	40.4	758.0
1976	32.6	120.2	89.6	55.5	160.9	74.4	77.6	41.8	151.5	100.8	107.7	75.8	1,088
1977[1]	103.7	92.3	236.4	103.3	209.4	159.9	154.2	72.0	66.0	108.8	185.5	175.3	1,667
1978[1]	113.1	141.8	252.6	218.9	176.4	147.2	165.5	108.8	193.4	96.8	154.8	175.4	1,945
1979[1]	219.1	249.8	199.0	185.6	107.3	299.0	166.2	187.4	159.1	127.8	208.5	261.9	2,371
1980[1]	173.4	250.0	325.4	269.6	327.3	194.6	109.7	175.7	171.2	112.5	84.7	120.5	2,315
1981[1]	116.0	121.0											

[1] Preliminary. *Source: Dept. of Commerce*

Average Prices of Crude Domestic Soybean Oil (in Tank Cars) F.O.B. Decatur In Cents per Pound

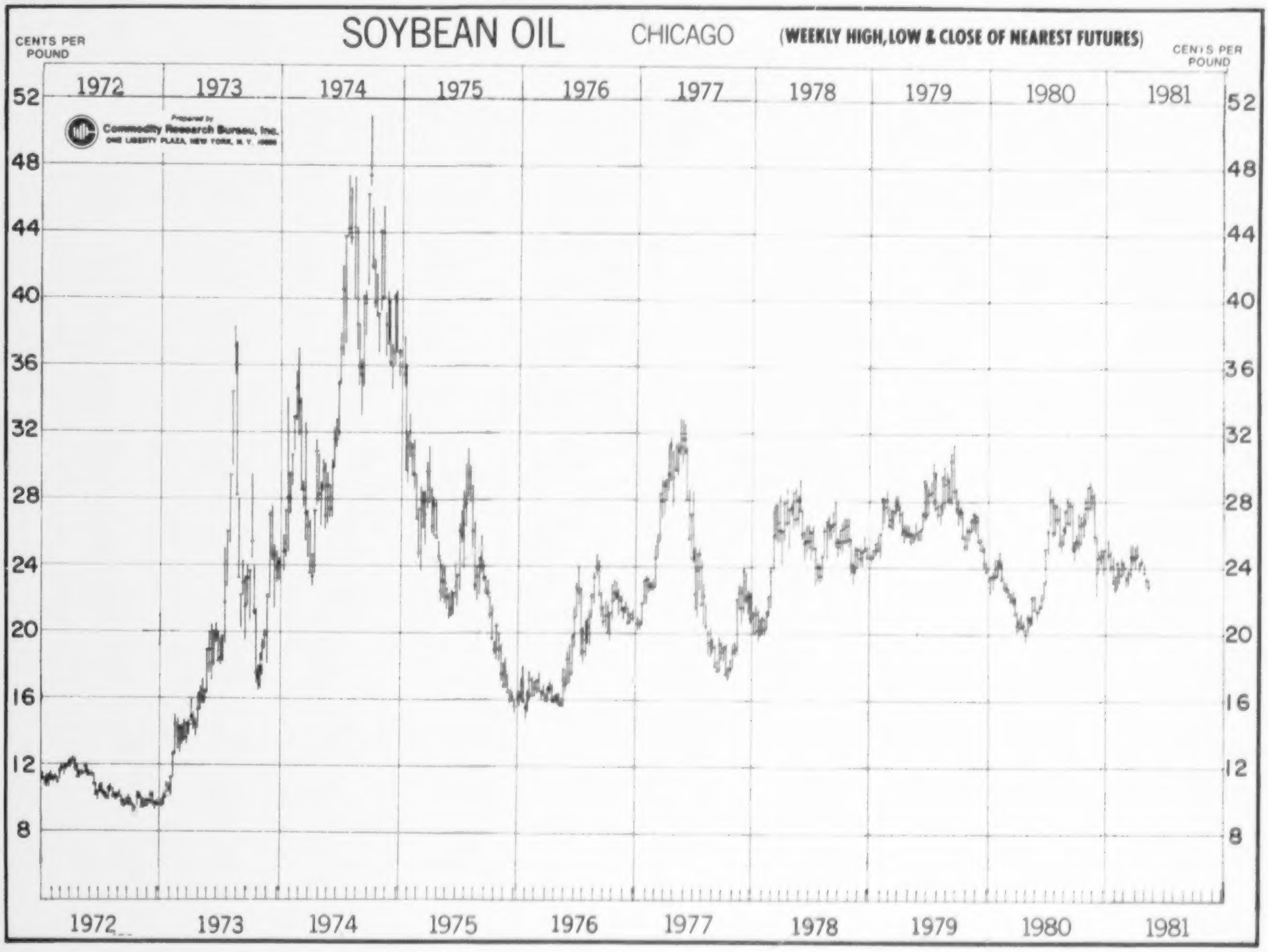
Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Average
1968–9	7.3	7.9	8.1	8.6	9.1	8.8	8.4	8.4	7.8	8.2	8.9	9.7	8.4
1969–0	10.6	10.9	9.6	9.6	11.5	12.2	12.2	11.3	11.1	11.5	11.6	12.1	11.2
1970–1	14.0	13.9	12.4	12.3	12.1	12.2	11.2	11.4	12.8	14.5	14.5	12.8	12.8
1971–2	13.2	12.5	11.7	10.9	11.0	11.7	11.9	11.4	10.7	10.3	10.1	9.8	11.3
1972–3	9.6	9.6	9.7	10.1	13.0	13.9	15.0	17.1	19.3	22.4	33.5	24.3	16.5
1973–4	23.1	20.4	26.0	28.6	36.4	30.2	28.2	29.4	31.6	40.5	43.3	40.7	31.5
1974–5	42.3	40.4	38.0	33.6	29.4	29.1	28.2	23.6	23.3	27.5	28.5	24.4	30.7
1975–6	21.4	18.9	16.8	16.2	16.3	16.6	16.3	15.8	17.6	20.9	20.4	22.5	18.3
1976–7	20.7	21.8	21.0	20.9	22.4	26.5	29.6	31.3	28.3	23.8	21.1	19.2	23.9
1977–8	18.8	21.0	22.6	20.9	21.6	26.6	26.8	28.8	26.9	25.9	26.3	27.8	24.5
1978–9	26.7	23.7	25.8	25.8	27.3	26.9	26.7	27.8	27.4	29.1	29.2	30.0	27.2
1979–0	27.9	27.8	26.2	23.6	23.4	22.1	20.3	20.8	21.6	26.2	25.9	26.1	24.3
1980–1	25.1	26.7	23.7	23.0	22.0	23.1							
1981–2													

Source: Bureau of Labor Statistics

Average Price of Refined (in Tanks) Soybean Oil at New York In Cents per Pound

Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Average
1968–9	9.3	10.0	10.6	10.7	11.0	10.6	10.6	10.4	9.6	9.9	10.8	11.5	10.4
1969–0	12.4	12.7	11.6	11.6	13.6	14.0	13.9	13.3	13.0	13.4	13.5	13.8	13.1
1970–1	15.9	16.0	14.2	14.3	14.2	14.3	13.2	13.0	14.2	16.0	16.0	14.5	14.7
1971–2	14.6	14.1	12.8	12.4	12.5	13.0	13.6	13.0	12.3	11.7	11.4	11.4	12.7
1972–3	11.1	11.2	11.1	11.5	14.2	15.5	16.8	18.3	20.5	21.7	34.5	25.7	17.7
1973–4	25.7	22.1	27.8	29.1	36.7	33.1	29.7	31.0	33.1	40.9	45.1	41.9	33.0
1974–5	45.3	41.5	39.7	35.0	30.4	30.9	29.8	25.2	25.4	31.1	32.5	29.7	33.0
1975–6	26.8	24.1	22.2	21.3	21.2	21.9	21.5	21.4	22.4	25.7	25.5	28.4	23.6
1976–7	26.8	27.0	26.1	26.0	27.8	31.1	34.3	36.8	33.7	28.8	26.9	24.6	29.2
1977–8	24.2	25.9	27.8	26.1	26.8	31.7	32.5	34.2	31.8	31.3	31.0	32.7	29.7
1978–9	32.1	33.5	33.0	30.8	32.7	33.0	31.8	31.6	32.7	34.3	34.7	35.0	32.9
1979–0	32.6	32.6	30.9	28.2	28.9	27.4	25.4	25.6	26.2	31.9	31.8	32.0	
1980–1	30.2	30.9	28.6	28.2	26.5								
1981–2													

Source: Bureau of Labor Statistics



High, Low & Closing Prices of May Soybean Oil Futures on the Chicago Board of Trade

In Cents per Pound

Year of Delivery		Year Prior to Delivery										Delivery Year					Life of Delivery Range
		Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	
1978	High	26.20	27.35	27.90	28.35	23.32	20.95	20.39	20.10	21.75	22.40	21.88	22.15	28.25	28.65	28.80	28.80
	Low	24.50	25.20	25.60	22.90	20.35	18.35	18.05	18.00	18.65	20.40	19.82	20.02	22.25	24.15	26.30	18.00
	Close	26.00	26.55	27.90	24.32	20.70	18.50	19.82	18.92	20.45	21.05	20.36	22.13	26.15	27.47	27.97	—
1979	High	22.13	23.70	25.12	24.95	22.45	24.05	25.15	26.35	25.80	25.70	25.97	28.85	28.30	27.85	26.45	28.85
	Low	21.40	20.90	21.50	21.35	20.95	21.10	23.10	23.92	23.55	23.92	24.28	25.31	26.35	25.50	25.27	20.90
	Close	21.75	21.58	25.00	22.30	22.13	22.90	24.10	25.90	24.65	24.67	25.37	27.53	27.57	26.00	25.85	—
1980	High	25.70	25.74	26.45	29.20	28.45	27.35	28.25	27.25	26.50	26.15	24.80	25.37	23.54	21.19	21.20	29.20
	Low	24.70	24.55	25.25	25.95	25.80	25.35	25.55	25.05	25.16	24.60	23.45	23.21	20.72	19.53	19.75	19.53
	Close	25.25	25.37	26.22	26.60	26.05	26.40	26.68	25.58	25.88	24.62	24.63	23.32	20.74	19.86	20.90	—
1981	High	26.15	24.00	24.05	25.65	29.40	28.55	29.70	29.20	31.45	30.75	27.35	25.55	25.40	25.51		
	Low	23.60	22.35	22.35	22.80	25.45	26.50	26.80	26.81	28.25	24.25	23.40	23.60	23.50	23.60		
	Close	23.60	22.37	23.38	25.62	28.30	28.05	27.21	28.28	30.70	26.00	23.57	24.84	25.15	23.84		
1982	High	28.60	29.02														
	Low	27.13	27.75														
	Close	28.60	27.75														

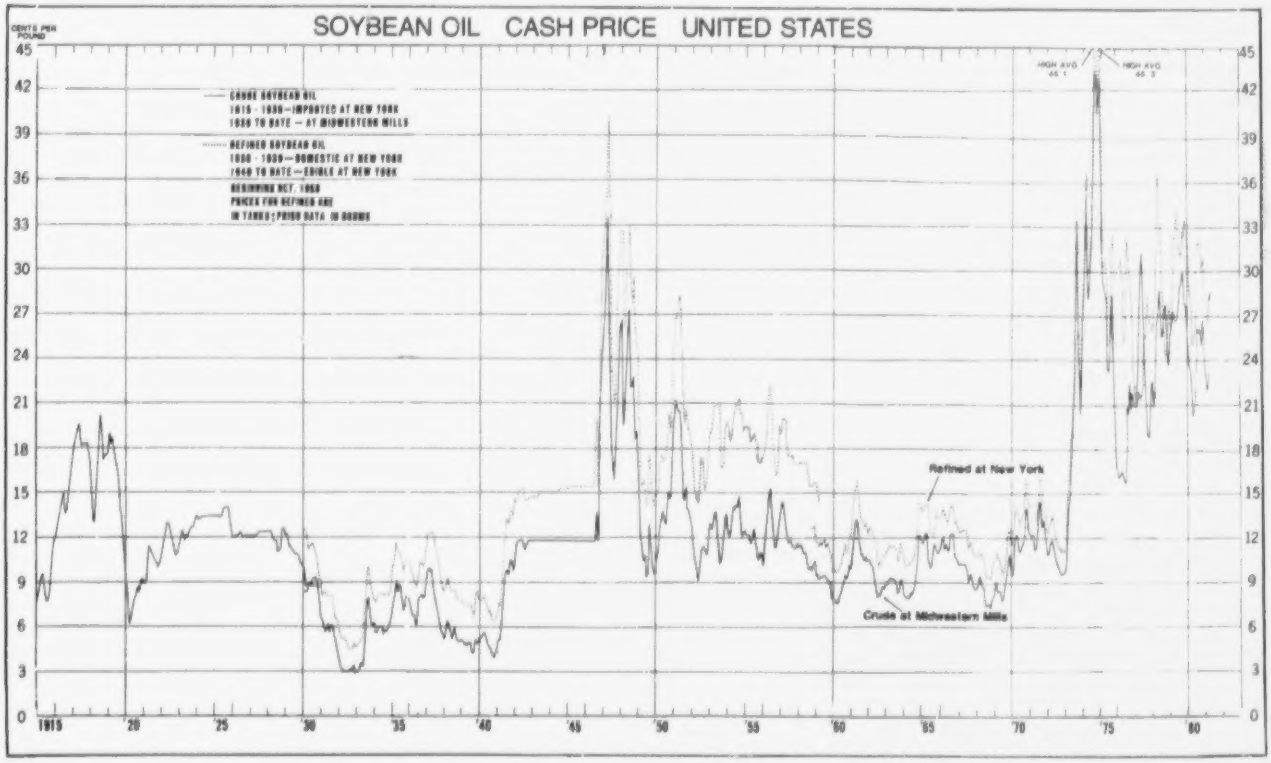
Source: Chicago Board of Trade

SOYBEAN OIL

Supply & Distribution of Soybean Oil in the U.S. In Millions of Pounds

				Domestic Disappearance												
					Food					Non-Food						
Year Begin. Oct.	Production	Stocks Oct. 1	Exports & Shipments	Total	Shortening	Margarine	Cooking & Salad Oils	Other Edible	Total Food	Paint & Varnish	Resins & Plastics	Fatty Acids	Other Inedible	Foots & Loss	Total Non-Food
1968–9	6,531	540	899	5,756	1,978	1,290	1,967	36	5,271	87	94	—	58	236	485
1969–0	7,904	415	1,448	6,328	2,255	1,415	2,150	37	5,857	94	79	1	54	243	471
1970–1	8,265	543	1,782	6,253	2,077	1,381	2,288	34	5,780	82	65	3	56	267	472
1971–2	7,892	773	1,440	6,440	2,089	1,413	2,469	48	6,009	81	55	6	38	251	431
1972–3	7,501	785	1,086	6,685	2,230	1,491	2,469	39	6,229	81	57	9	40	270	456
1973–4	8,995	516	1,461	7,256	2,321	1,513	2,884	30	6,748	91	77	12	48	280	508
1974–5	7,375	794	1,090	6,518	1,882	1,486	2,680	22	6,070	82	58	16	31	260	448
1975–6	9,630	561	1,034	7,906	2,416	1,691	3,274	24	7,405	94	96	23	25	294	501
1976–7	8,578	1,251	1,607	7,454	2,189	1,568	3,165	25	6,947	85	83	26	36	278	507
1977–8[1]	10,288	771	2,137	8,193	2,433	1,592	3,568	29	7,621	87	79	42	33	308	549
1978–9[1]	11,323	729	2,409	8,867	2,479	1,593									
1979–0[1]	12,105	776	2,770	8,981	2,680	1,643									
1080–1[2]	11,550	1,210	2,300	9,250											
1981–2															

[1] Preliminary. [2] Forecast. *Source: Economic Research Service, U.S.D.A.*



Soybean Oil Consumption in End Products in the U.S. In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1968	457.1	450.8	448.5	428.0	448.1	457.0	413.3	444.9	457.0	496.0	442.1	467.8	5,411
1969	489.0	429.2	478.8	464.5	485.4	517.2	457.7	480.8	513.5	552.5	527.7	551.9	5,948
1970	531.0	523.3	554.7	526.1	491.0	549.5	488.3	513.7	524.3	548.2	519.9	552.3	6,322
1971	534.7	505.8	535.0	497.9	505.6	556.3	497.3	537.3	554.0	522.0	522.2	554.8	6,323
1972	557.4	535.3	592.2	553.5	589.0	572.6	506.5	578.4	562.8	594.7	590.7	594.1	6,827
1973	595.8	546.3	599.0	529.6	592.5	542.6	471.7	580.8	530.3	621.0	629.2	591.9	6,831
1974	673.7	599.8	644.9	583.4	585.0	571.3	597.0	569.2	524.4	621.8	552.1	516.4	7,039
1975	553.4	521.2	528.2	540.3	527.4	531.3	555.3	562.8	604.8	672.0	609.2	624.4	6,830
1976	658.0	617.6	687.3	623.4	625.9	634.6	626.8	635.1	623.7	621.3	609.1	613.8	7,577
1977[1]	571.5	591.2	694.5	597.0	611.0	553.8	517.9	629.8	621.5	658.6	682.3	721.9	7,451
1978[1]	664.1	648.8	771.7	686.5	662.4	640.5	596.2	699.8	672.5	715.9	709.3	707.5	8,175
1979[1]	695.1	636.2	755.3	682.4	775.0	701.6	711.4	744.8	700.9	781.4	742.2	730.1	8,656
1981[1]	750.7	719.4	762.9	671.6	693.6	683.7	671.2	754.5	737.1	719.1	682.6	738.8	8,585
1982[1]	697.8	680.8	776.7										

[1] **Preliminary.** *Source: Bureau of the Census*

Month End Open Interest of Soybean Oil Futures of the Chicago Board of Trade In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	40,175	44,145	49,994	49,592	55,292	52,682	52,230	49,553	50,322	60,842	57,363	54,133
1979	50,713	57,729	57,893	55,657	57,820	64,671	58,852	58,258	60,854	67,778	65,893	64,374
1980	62,515	63,472	59,707	52,805	61,089	65,949	64,710	63,908	66,723	75,815	91,407	71,527
1981	58,671	65,580	57,956	67,241								

Source: Chicago Board of Trade

Volume of Trading of Soybean Oil Futures at the Chicago Board of Trade In Thousands of Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	209.5	183.4	312.7	266.8	258.1	278.6	215.2	236.3	204.3	285.4	257.3	201.7	2,909
1979	215.0	291.5	233.8	254.4	212.3	321.7	313.0	252.5	262.0	311.6	222.3	191.6	3,082
1980	200.7	210.3	177.1	185.0	198.2	216.9	361.8	284.8	329.9	332.6	327.0	343.7	3,168
1981	243.8	231.1	237.9	254.0									
1982													

Source: Chicago Board of Trade

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Soybeans

U.S. soybean supplies for the 1980/81 marketing year, ending August 31, 1981, totaled 2.18 billion bushels, 11 percent below the record level of 2.44 billion in 1979/80.

Soybean crushings for the 1980/81 season were projected by the USDA at 1.08 billion bushels, approximately 4 percent below the 1979/80 level. Crush margins remained unfavorable throughout most of calendar year 1980, with the relatively firm soybean meal prices only partly offsetting the weakness in soybean oil prices. (Crush margin represents the difference between the cost of soybeans and that of both soybean products, soybean meal plus soybean oil.) Late June increases in soybean prices brought Chicago board crush margins to their 1980 lows, while December strength in product prices brought those margins to their 1980 highs. From September to December 1980, the crushing industry operated at a little over 80 percent of capacity. Crush margin expectations for the 1980/81 season were largely based on expected relative strength in soybean meal. A few years ago, a soybean crushing margin of 30 to 40 cents per bushel was considered favorable. But this is no longer the case, because of inflation, high labor and machinery costs, and increases in processing materials, such as hexane solvent.

Through early 1981, the oil yield per bushel of soybeans averaged around 10.9 pounds, compared with 11 pounds average during the 1979/80 season. Average meal yields per bushel were 47.8 pounds, unchanged from the 1979/80 average.

U.S. soybean exports for the 1980/81 season were forecast by the USDA at 760 million bushels, compared with 875 million in 1979/80. Major foreign markets for U.S. soybeans continue to be the Netherlands, Spain, The Federal Republic of Germany, France, Italy, The People's Republic of China, and Taiwan. However, much of the decline in 1980/81 U.S. exports was because of reduced demand in the European Economic Community countries. After the Reagan administration lifted the grain embargo against the USSR in April 1981, expectations were that the USSR would once again become a major buyer of U.S. soybeans. In recent years, Mexico has been steadily increasing its purchases of U.S. soybeans. In 1979/80, the 875 million bushels of total U.S. soybean exports accounted for approximately 80 percent of total world soybean trade. However, the lower projected U.S. 1980/81 exports, combined with the record large South American crops, were expected to reduce the 1980/81 U.S. share of world soybean trade. Also, higher world protein meal prices relative to world grain prices caused reduced feeding rates and less favorable feed profitability, despite increased animal numbers.

U.S. carryover of soybeans on August 31, 1981 was expected to total 210.0 million bushels, 42 percent below ending stocks a year earlier.

World 1980/81 supplies (production plus carryover) were estimated at 100.96 million tonnes, compared with 104.33 million the previous season. World exports were expected to total 26.51 million tonnes, down from 28.42 million in 1979/80. About 72 percent of world total supplies were expected to be crushed in 1980/81, nearly 6 percent below the average of the four previous seasons. World ending stocks for 1980/81 were projected at 16.61 million tonnes, or more than 2½ month's average world crush needs. (Estimated world total ending stocks do not represent stocks at any particular point in time, because the estimate represents the ending stocks of different countries which have different marketing years.)

Soybean prices declined to their 1980 lows in early spring. In early June, as the markets became increasingly concerned about the developing drought in crop growing regions, prices began an upward climb which peaked in December. In December, the futures market reacted to high interest rates and recognized that adequate soybean stocks and lowered consumption would offset the effect of drought-reduced production, and prices declined.

Government Support Program

The national average loan rate for 1981 crop soybeans was established by the USDA at $5.02 per bushel (No. 1 grade; 12.8–13.0 percent moisture), unchanged from 1980. Loans mature nine months after the date of loan approval.

Futures Markets

Soybean futures in the U.S. are traded on the Chicago Board of Trade and on the MidAmerica Commodity Exchange in Chicago.

World Production of Soybeans In Thousands of Metric Tons

Year of Harvest*	Argentina	Brazil	Canada	China[2]	Colombia	Indonesia	Japan	Korea, South	Mexico	Romania	Taiwan	Thailand	United States	U.S.S.R.	World Total
1970	27	1,509	283	6,200	95	498	126	232	240	91	65	70	30,839	603	41,811
1971	59	2,077	280	6,900	106	475	122	222	250	165	61	67	30,675	535	43,556
1972	78	3,666	375	6,500	122	516	127	224	375	186	60	80	34,581	258	47,646
1973	496	7,876	397	10,000	114	541	118	246	510	244	61	115	42,117	424	63,912
1974	485	9,892	301	9,500	114	589	133	319	420	298	67	114	33,102	360	56,513
1975	695	10,810	367	10,000	169	590	126	311	625	213	62	121	42,113	780	67,914
1976	1,400	12,200	250	9,000	75	590	126	311	280	213	53	121	35,042	480	59,288
1977	2,700	10,200	527	9,500	135	523	111	319	470	191	41	90	47,947	540	72,021
1978[1]	3,700	10,200	516	7,600	137	571	190	293	330	227	45	120	50,898	634	77,225
1979[1]	3,800	15,040	672	7,500	145	570	192	257	600	376	45	135	61,722	470	93,630
1980[3]	4,200	15,400	710	7,500									49,453	540	82,240

[1] Preliminary. [2] Mainland. [3] Projected. * Split year includes Northern Hemisphere crops harvested in the late months of the first year shown combined with Southern Hemisphere crops harvested in the early months of the following year.
Source: Foreign Agricultural Service, U.S.D.A.

U.S. Soybean Price Support Program & Official Crop Production Reports In Millions of Bushels

			Sept. 1 Stocks		National Avg. Support		(In Thousands of Bushels) Crop Production Reports					
Year	Quantity Put Under Support	Deliveries to C.C.C.	Total	Gov't. Owned	% of Parity	$ Per Bu.	August 1	September 1	October 1	November 1	December 1	Final
1968	340.3	170.1	166.3	137.9	74	2.50	1,064,358	1,079,627	1,065,552	1,079,490	1,079,662	1,106,958
1969	179.5	.2	326.8	336.8	62	2.25	1,060,859	1,054,722	1,070,182	1,094,466	1,116,876	1,133,120
1970	146.4	[2]	229.8	196.9	60	2.25	1,113,566	1,133,193	1,134,595	1,134,151	1,135,769	1,127,100
1971	168.2	[2]	98.8	11.4	56	2.25	1,235,451	1,186,301	1,175,447	1,200,201	1,169,361	1,176,101
1972	90.6	[2]	72.0	1.5	54	2.25	1,269,616	1,286,015	1,317,090	1,350,517	1,276,290	1,270,608
1973	124.2	[2]	59.6	—	45	2.25	1,539,771	1,598,746	1,588,361	1,574,586	1,566,518	1,547,543
1974	34.6	—	170.8	—	37	2.25	1,314,232	1,315,792	1,262,352	1,243,912	1,233,425	1,216,287
1975	—	—	188.2	.4	—None—		1,457,672	1,442,422	1,473,782	1,519,882	1,521,370	1,548,344
1976	22.5	—	244.9	—	34	2.50	1,344,343	1,274,263	1,249,713	1,252,148	1,287,560	1,288,608
1977	97.5	—	102.9	—	46	3.50	1,602,065	1,644,220	1,647,315	1,682,705	1,761,755	1,767,267
1978	64.2	—	161.0	—	51	4.50	1,765,024	1,772,364	1,792,064	1,810,289	1,870,181	1,868,754
1979[1]	120.0	—	174.1	—	45	4.50	2,129,254	2,174,179	2,213,289	2,235,869	2,267,647	2,267,901
1980[1]			358.8	—	40	5.02	1,880,342	1,831,172	1,757,272	1,774,742	1,817,097	
1981						5.02						

[1] Preliminary. [2] Less than 50,000 bushels. *Source: Crop Reporting Board, U.S.D.A.*

Soybean Stocks in the United States In Thousands of Bushels

	On Farms				Off Farms				Total Stocks			
Year	Jan. 1	April 1	June 1[2]	Sept. 1	Jan. 1	April 1	June 1[2]	Sept. 1	Jan. 1	April 1	June 1[2]	Sept. 1
1968	350,816	235,842	120,742	60,709	432,333	301,182	164,389	105,618	783,149	537,024	285,131	166,327
1969	410,168	276,930	141,360	70,551	550,329	452,343	316,815	254,992	960,497	729,300	458,175	325,543
1970	372,069	209,236	78,711	40,580	683,425	525,001	324,676	189,256	1,055,494	734,237	403,387	229,836
1971	391,960	246,491	90,595	20,554	553,012	369,063	190,832	78,225	944,972	615,554	281,427	98,779
1972	397,605	218,609	58,438	11,779	491,387	333,677	174,394	60,183	888,992	552,286	232,832	71,962
1973	429,071	145,333	33,855	9,415	437,924	358,372	145,352	50,222	866,995	503,705	179,207	59,637
1974	608,160	331,885	151,104	64,545	552,756	405,943	190,865	106,337	1,160,916	737,828	341,969	170,882
1975	483,869	331,241	165,324	75,114	505,392	323,317	191,704	109,922	989,261	654,558	357,028	185,036
1976	590,466	411,366	253,963	86,150	665,689	456,283	300,938	158,781	1,256,155	867,649	554,901	244,931
1977	473,120	227,723	92,374	32,748	559,045	390,214	243,335	70,168	1,032,165	617,937	335,709	102,916
1978	672,861	393,684	207,102	59,000	652,400	455,448	298,815	102,044	1,325,261	849,132	505,917	161,044
1979	699,556	412,570	241,255	61,509	692,534	467,646	284,850	112,579	1,392,090	880,216	526,105	174,088
1980[1]	892,934	602,779	396,650	128,888	877,896	580,322	378,152	229,880	1,770,830	1,183,101	774,802	358,768
1981[1]	738,845	539,645			790,300	493,907			1,529,541	1,033,552		
1982												

[1] Preliminary. [2] Data prior to 1976 are AS OF JULY 1. *Source: Crop Reporting Board, U.S.D.A.*

U.S. Commercial Stocks of Soybeans on the First of the Month In Millions of Bushels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1968	23.1	21.5	21.0	20.0	14.9	11.8	12.6	9.1	5.5	6.5	41.3	48.9
1969	45.6	46.9	51.1	50.7	48.2	39.1	35.9	31.9	32.7	34.1	60.2	80.2
1970	79.4	84.8	82.5	82.3	72.4	59.0	43.8	8.7	34.3	17.8	30.1	40.7
1971	47.2	51.4	54.4	57.1	54.2	41.6	35.0	36.5	17.3	12.1	48.5	48.8
1972	41.8	37.7	41.1	49.0	48.4	36.1	27.1	18.8	13.6	7.0	25.0	32.0
1973	39.1	32.0	56.8	59.7	48.9	31.8	22.8	16.6	12.1	10.5	30.4	35.6
1974	33.6	32.0	35.3	36.2	27.3	21.2	21.2	20.3	18.0	14.3	51.6	55.4
1975	48.1	43.3	40.5	31.1	18.0	12.8	16.6	13.0	12.6	14.2	60.2	62.5
1976	52.0	55.7	57.1	51.7	42.5	37.0	32.5	30.4	21.3	27.9	54.4	52.2
1977	46.8	49.5	51.1	52.3	55.4	50.0	38.7	19.6	8.5	10.9	43.6	50.9
1978	46.2	44.3	41.8	49.1	47.9	42.7	30.6	23.0	10.7	13.0	58.3	63.2
1979	60.9	57.6	62.0	60.8	52.5	40.7	37.6	31.2	19.3	11.5	77.6	84.9
1980	76.5	71.5	73.2	72.3	56.5	52.6	53.2	51.8	44.8	51.5	80.6	79.5
1981	73.1	71.1	69.0	53.1	45.3							

Source: Foreign Agricultural Service, U.S.D.A.

SOYBEANS

Salient Statistics of Soybeans in the United States

Crop Year	1,000 Acres		Yield Per Acre (Bus.)	Farm Price ($ Bu.)	Farm Value (Million Dollars)	Pounds Per Bushel Crushed		U.S. Exports of Soybeans Crop Year (Sept.-Aug.) (Ths. Metric Tons[2])								
	Planted Alone	Acreage Harvested				Yield of Oil	Yield of Meal	Grand Total	Bel.-Luxem.	Denmark	Canada	W. Germany	Japan	Netherlands	Taiwan	U.S.S.R.
1968–9	42,265	41,391	26.7	2.43	2,689	10.61	47.43	286.8	10.2	11.8	37.9	30.5	69.9	42.7	16.6	—
1969–0	42,534	41,337	27.4	2.35	2,664	10.66	47.36	432.6	16.1	18.4	70.0	41.8	101.4	57.4	21.2	—
1970–1	43,802	42,249	26.7	2.85	3,215	10.83	47.39	433.8	13.2	21.4	42.2	53.0	102.8	57.9	19.6	—
1971–2	43,472	42,705	27.5	3.03	3,560	10.98	47.43	416.8	5.7	16.2	31.3	52.0	107.4	64.1	23.9	0
1972–3	46,885	45,683	27.8	4.37	5,551	10.59	47.04	479.4	8.2	17.4	22.1	54.7	121.0	84.3	19.6	31.5
1973–4	56,675	55,667	27.8	5.68	8,787	10.76	47.18	539.1	13.2	12.5	37.9	72.9	98.8	101.1	20.5	.7
1974–5	53,507	51,341	23.7	6.64	8,070	10.51	47.48	420.7	5.6	5.9	26.9	51.0	96.9	77.7	24.4	0
1975–6	54,550	53,617	28.9	4.92	7,618	10.94	47.27	555.1	17.7	15.1	28.0	45.6	118.1	130.5	32.8	11.4
1976–7	50,226	49,401	26.1	6.81	8,769	11.09	47.81	15,351	411	306	462	1,520	3,219	3,007	697	825
1977–8	58,760	57,830	30.6	5.88	10,352	10.89	47.34	19,061	475	423	264	1,521	3,636	4,086	854	744
1978–9	64,[illegible]08	63,663	29.4	6.66	12,450	11.07	47.63	20,115	420	341	352	1,486	3,865	4,012	1,271	1,178
1979–0[1]	71,632	70,566	32.1	6.28	14,250	10.74	47.96	23,818	584	342	392	1,318	3,868	6,035	780	813
1980–1[1]	170,087	67,856	26.8	8.39	15,253											
1981–2[1]	69,817															

[1] Preliminary. [2] Data prior to 1976–7 are in MILLIONS OF BUSHELS. *Source: Crop Reporting Board, U.S.D.A.*

Supply and Distribution of Soybeans in the United States In Millions of Bushels

Crop Year Begin. Sept. 1	Supply						Distribution					
	Stocks, Sept. 1											
	Farms	CCC	Mills, Elevators[2]	Total	Production	Total Supply	Crushings	Exports	Seed	Feed	Residual	Total Distribution
1968–9	60.7	—	105.6	166.3	1,107.0	1,273.3	605.9	286.8	47.3	.9	5.4	946.4
1969–0	70.6	5.3	247.3	326.8	1,133.1	1,459.9	737.3	432.6	48.5	.9	10.8	1,230.1
1970–1	40.6	8.7	180.5	229.8	1,127.1	1,356.9	760.1	433.8	48.1	1.1	15.1	1,258.2
1971–2	20.6	—	78.2	98.8	1,176.1	1,274.9	720.5	416.8	51.0	1.1	13.5	1,202.9
1972–3	11.8	0	60.2	72.0	1,270.6	1,342.6	721.8	479.4	60.8	1.1	19.8	1,282.9
1973–4	9.4	0	50.2	59.6	1,547.5	1,607.1	821.3	539.1	56.1	1.2	18.7	1,436.4
1974–5	64.5	0	106.3	170.9	1,216.3	1,387.2	701.3	420.7	57.2	1.0	21.7	1,201.9
1975–6	75.1	0	109.9	188.2	1,548.3	1,736.5	865.1	555.1	53.5	1.2	15.7	1,490.6
1976–7	86.2	0	158.8	244.9	1,288.6	1,533.5	790.2	564.1	61.0	1.0	13.3	1,429.6
1977–8	32.7	0	70.2	102.9	1,767.3	1,870.2	926.7	700.5	68.0	1.0	7.5	1,703.7
1978–9	59.0	0	102.0	161.0	1,868.8	2,029.8	1,018	753.0	75.0	1.0	11.0	1,858.0
1979–0[1]	61.5	0	112.6	174.1	2,267.9	2,442.0	1,123	875.0	67.0	1.0	17.0	2,083.0
1980–1[3]	128.9	0	229.9	358.8	1,817.1	2,175.9	1,075	800.0	69.0	1.0	21.0	1,966.0
1981–2												

[1] Preliminary. [2] Also warehouses. [3] Estimates. *Source: Economic Research Service, U.S.D.A.*

Production of Soybeans for Beans in the U.S., by Selected States In Millions of Bushels

Year	Ark.	So. Car.	Ill.	Ind.	Iowa	La.	Mich.	Minn.	Miss.	Mo.	N. Car.	Ohio	Tenn.	Nebr.	Ky.
1968	91.3		209.9	103.9	178.0	38.8	12.0	71.1	56.3	102.6	17.0	70.9	24.2		
1969	92.4	22.5	228.8	106.0	177.1	33.0	11.6	75.0	50.7	80.3	23.0	73.0	29.0	24.9	12.6
1970	99.0	20.2	210.8	101.6	184.6	40.5	13.3	78.8	58.1	88.4	20.8	72.7	26.5	17.9	14.3
1971	92.5	23.0	236.0	111.4	178.8	39.5	10.3	63.9	56.6	97.3	23.8	80.3	31.7	15.2	20.8
1972	81.0	20.0	259.4	108.8	216.0	38.3	13.6	90.3	48.0	108.9	29.1	79.8	28.6	23.0	23.6
1973	116.3	23.0	281.3	135.1	263.5	34.8	16.6	127.3	60.5	126.9	34.8	89.8	36.9	36.3	26.0
1974	81.7	24.0	202.6	97.3	199.1	44.0	13.2	84.0	46.3	93.5	30.5	79.8	31.9	28.2	25.0
1975	117.5	30.4	299.5	121.6	237.0	48.0	15.9	98.6	70.2	113.6	33.4	102.3	46.3	32.4	29.7
1976	82.1	21.4	249.5	111.5	200.0	63.0	11.6	66.4	71.5	84.0	24.6	95.0	40.5	19.6	28.9
1977	105.8	26.7	336.3	144.3	251.3	63.0	21.6	133.8	78.5	148.8	29.0	120.0	52.2	40.7	40.9
1978	115.2	32.3	309.5	144.2	283.1	76.0	21.6	146.2	81.7	155.0	40.3	127.7	56.9	42.5	40.8
1979	144.2	39.8	379.1	159.1	306.4	93.8	30.3	162.6	118.9	183.6	45.8	144.8	70.7	54.7	54.0
1981[1]	69.6	22.4	309.9	157.7	322.5	70.4	30.4	152.3	61.6	138.3	35.7	135.4	48.5	53.1	36.8
1982															

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

High, Low & Closing Prices of May Soybean Futures at the Chicago Board of Trade In Cents per Bushel

Year of Delivery		Year Prior to Delivery										Delivery Year					Life of Delivery Range
		Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	
1978	High	748	783½	782	807½	670	598	589	581½	650	630½	619	596	747½	746	745	807½
	Low	708½	697	715	670	580	520	522½	532½	573	591½	565	566	593	647½	693	520
	Close	733½	739	778	700	585	537	559½	574¾	600¼	611¼	572½	590½	689½	722	729	—
1979	High	648	659	695	691	639	673½	697	753	736	727	733	797	785	755½	738½	797
	Low	614½	608½	619	620¼	606	606	646½	674	669	681	685	714	738	714	705¼	606
	Close	632	625½	690¼	645¼	625½	657	672¼	736½	697½	700¾	718¾	766	771¼	717	723½	—
1980	High	744½	747	760	859	823	773	790	788	739½	726½	704	710½	669½	611	624	859
	Low	735	719½	734	749	730½	720	729½	695	702	686½	653	656½	582½	569½	589½	569½
	Close	737½	739¾	756	764	738¾	757¾	762½	709¾	723¼	687¼	695½	657½	583	594½	612	—
1981	High	741½	713½	710	750	859	855½	933	997½	1,006	1,001	882	798½	788½	812½		
	Low	696½	681	684	680	744	783	842	847½	937	765½	735	754½	719½	757½		
	Close	699	692	695¾	750	822	854½	873¼	966½	997½	843½	751½	761	783½	778½		
1982	High	894	922														
	Low	859	872														
	Close	888½	873														

Source: Chicago Board of Trade

Soybean Stocks at U.S. Mills on First of Month In Thousands of Short tons[1]

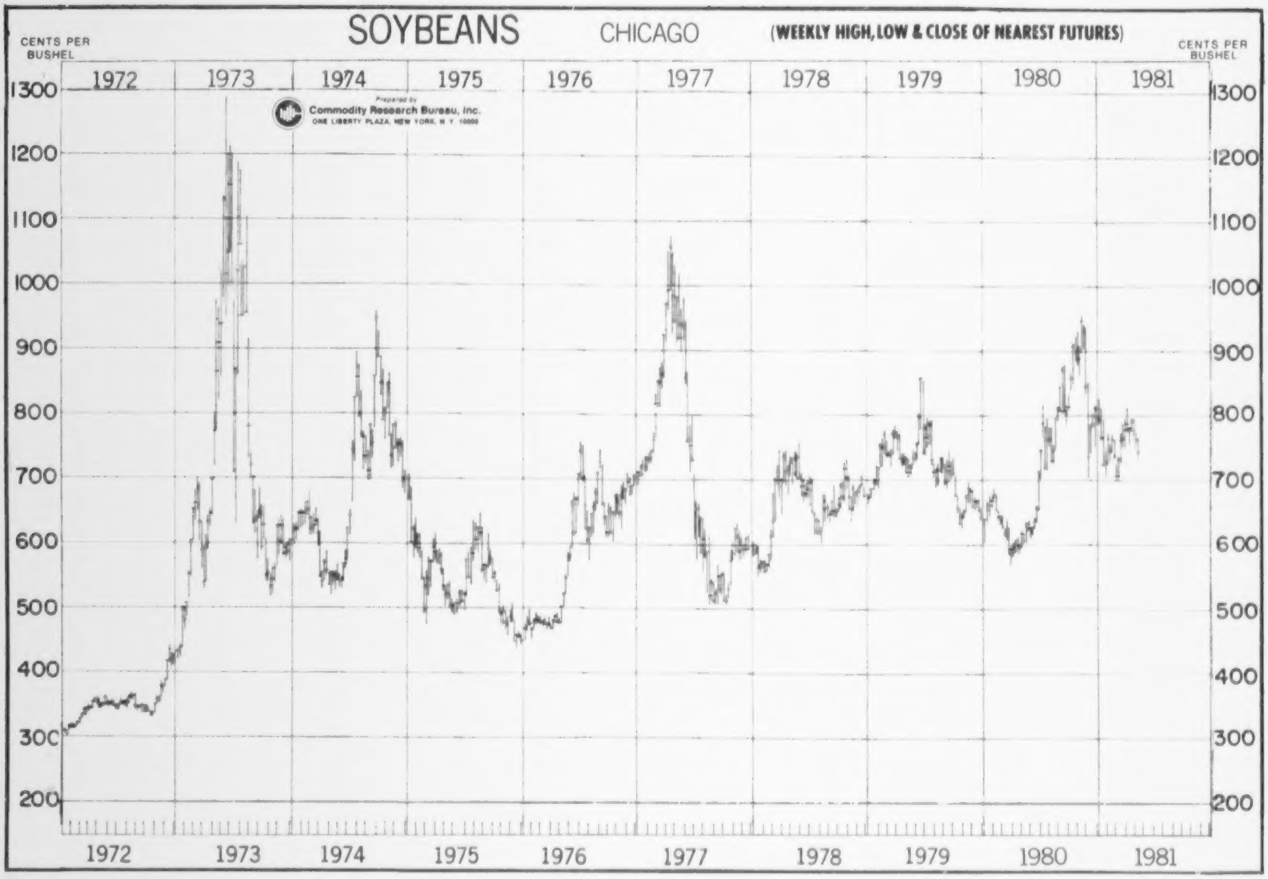
Crop Year	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
1970–1	33.4	30.4	98.3	145.9	163.2	152.6	143.5	131.0	110.3	95.2	91.5	71.6
1971–2	42.3	33.5	119.1	146.9	127.1	116.1	125.1	124.5	114.3	97.7	90.9	67.4
1972–3	38.1	12.3	91.3	111.1	117.4	136.6	133.3	124.0	107.9	88.5	68.2	58.5
1973–4	30.7	13.5	89.5	125.8	115.8	119.0	123.0	112.3	95.5	81.5	66.5	57.0
1974–5	41.6	23.0	93.9	123.0	102.5	83.2	79.2	65.3	55.4	44.3	37.7	35.4
1975–6	27.4	26.8	116.6	137.2	131.5	121.1	109.8	101.3	92.8	79.4	80.5	66.3
1976–7	48.7	63.0	127.5	159.8	154.2	147.5	146.5	140.3	126.8	108.6	83.4	50.9
1977–8	23.4	20.3	101.5	123.9	113.0	94.4	87.3	102.8	90.2	76.3	54.5	44.6
1978–9[1]	1,136	957	4,153	4,480	3,820	3,371	3,722	3,626	2,902	2,133	2,190	1,668
1979–0	1,124	1,176	4,996	5,536	4,899	4,363	3,931	3,559	2,874	2,392	2,272	2,218
1980–1	1,706	2,412	4,981	5,159	4,162	3,787						

[1] Data prior to 1978–9 are in MILLIONS OF BUSHELS. *Source: Economic Research Service, U.S.D.A.; Bureau of the Census*

Soybean Exports from the United States In Millions of Bushels

Year	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Total
1968–9	13.9	32.8	50.0	38.5	1.2	11.4	36.6	34.3	23.8	14.0	18.2	12.1	286.8
1969–0	13.3	52.5	53.7	39.9	28.7	31.6	39.2	41.2	37.1	38.5	25.2	31.6	432.6
1970–1	29.6	44.0	45.3	46.9	35.1	33.0	35.1	32.8	30.2	35.6	34.4	31.3	433.8
1971–2	29.2	29.4	47.4	50.3	42.4	35.5	31.3	37.3	31.7	31.1	26.3	24.9	416.8
1972–3	15.0	54.3	61.2	49.7	47.1	54.7	59.1	45.5	41.0	26.5	14.2	11.0	479.4
1973–4	7.5	46.6	74.4	58.0	48.3	56.4	57.9	62.0	43.5	36.1	27.1	21.2	539.1
1974–5	22.9	32.2	63.2	41.4	50.0	33.3	38.4	35.8	25.1	14.0	31.0	33.4	420.7
1975–6	24.3	62.7	61.5	49.6	51.8	52.2	52.3	50.5	49.5	47.2	29.2	24.3	555.1
1976–7	22.2	60.1	67.4	56.7	50.9	59.9	58.4	57.0	55.1	31.0	27.2	18.1	564.1
1977–8	15.0	77.6	87.7	57.0	52.6	54.4	66.6	72.7	79.3	63.4	34.7	39.3	700.5
1978–9[1]	38.0	87.6	101.7	70.6	77.0	53.2	83.5	67.7	47.1	41.0	32.7	39.7	739.7
1979–0[1]	14.0	89.0	118.1	78.3	86.0	73.0	69.0	82.0	74.0	59.0	49.0	57.0	875.0
1980–1	42.0	60.0	75.0	75.0									

[1] Preliminary. *Source: Bureau of the Census*



Volume of Trading in Soybean Futures at the Chicago Board of Trade[1] In Millions of Bushels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1968	432.1	275.3	283.6	311.0	302.5	408.1	465.6	447.8	400.4	676.0	435.4	280.5	4,718.3
1969	355.5	306.9	320.6	360.1	329.2	286.1	341.0	261.9	482.2	983.0	604.6	373.5	5,004.6
1970	485.9	412.8	394.1	497.7	389.1	1,132	1,485	874.5	722.9	1,470	1,185	1,107	10,156
1971	1,266	837.0	903.2	934.9	1,039	1,440	1,548	1,384	1,384	1,925	1,678	1,226	15,565
1972	1,441	1,371	2,133	2,086	1,732	1,543	1,398	1,665	1,150	1,559	2,039	2,100	20,217
1973	2,150	1,344	1,387	1,241	1,345	871	757	879	577	992	1,178	993	13,712
1974	1,229	1,045	1,224	1,187	1,234	1,194	1,103	1,122	885	1,368	892	1,173	13,564
1975	1,409	1,204	1,473	1,497	1,481	1,400	2,117	1,893	1,621	2,204	1,759	1,508	19,567
1976	1,533	1,298	1,215	1,456	2,410	3,414	2,638	2,333	2,480	3,023	2,893	2,678	27,371
1977	3,483	2,564	5,062	4,707	3,550	4,012	2,468	2,312	2,378	2,734	3,897	2,813	39,981
1978	2,978	2,224	5,057	4,121	3,820	3,742	2,662	2,965	2,561	4,754	3,992	3,511	42,386
1979	3,701	5,038	4,123	3,856	3,686	5,485	4,184	2,843	2,920	3,946	3,115	2,674	45,572
1980[2]	3,222	2,916	2,806	3,035	2,911	3,602	6,803	5,226	6,562	7,706	7,323	6,203	58,315
1981[2]	5,808	4,074	4,796	3,475									

[1] Trading on this market represents approximately 98% to 99% of all trading in Soybeans. [2] Preliminary.

Source: Commodity Futures Trading Commission

Soybeans Under Price Support Through the End of Month (Cumulative Totals from Current Season's Crop) In Thousands of Bushels

Year	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Total
1968–9	132	61,934	187,139	256,123	307,567	323,314	334,089	334,089	334,678	335,324	336,420	336,800	340,000
1969–0	44	30,274	97,992	137,766	172,395	175,913	178,173	179,366	179,540	179,609	179,598	179,600	180,000
1970–1	128	23,449	64,494	114,092	140,103	143,355	145,300	146,127	146,406	146,463	146,462	146,462	147,000
1971–2	992	41,831	101,163	140,421	163,979	167,187	168,044	168,221	168,271	168,297	—	—	168,278
1972–3	58	21,067	56,609	75,190	86,803	89,338	90,368	90,546	90,561	90,560	—	—	
1973–4	171	11,009	75,213	101,310	120,240	122,752	123,613	124,067	124,170	124,188	—	—	
1974–5	121	3,868	13,186	19,410	22,426	23,275	23,828	34,217	34,543	34,574	—	—	
1975–6	No Program												
1976–7	270	3,398	8,471	13,398	14,966	15,253	15,433	22,450	22,491	22,491	—	—	
1977–8	360	13,135	47,879	68,269	89,128	93,293	96,234	96,808	97,048	97,146	—	—	
1978–9	0	6,403	31,008	43,015	58,278	61,489	62,365	63,146	63,508	64,087	—	—	
1979–0	11	9,507	39,559	67,372	101,052	106 135	113,638	119,860	121,684	122,013	—	—	
1980–1	22	11,705	28,541	67,744	100,809	116,167							

Source: U.S. Department of Agriculture

Soybean Receipts at Primary Markets in the United States In Thousands of Bushels

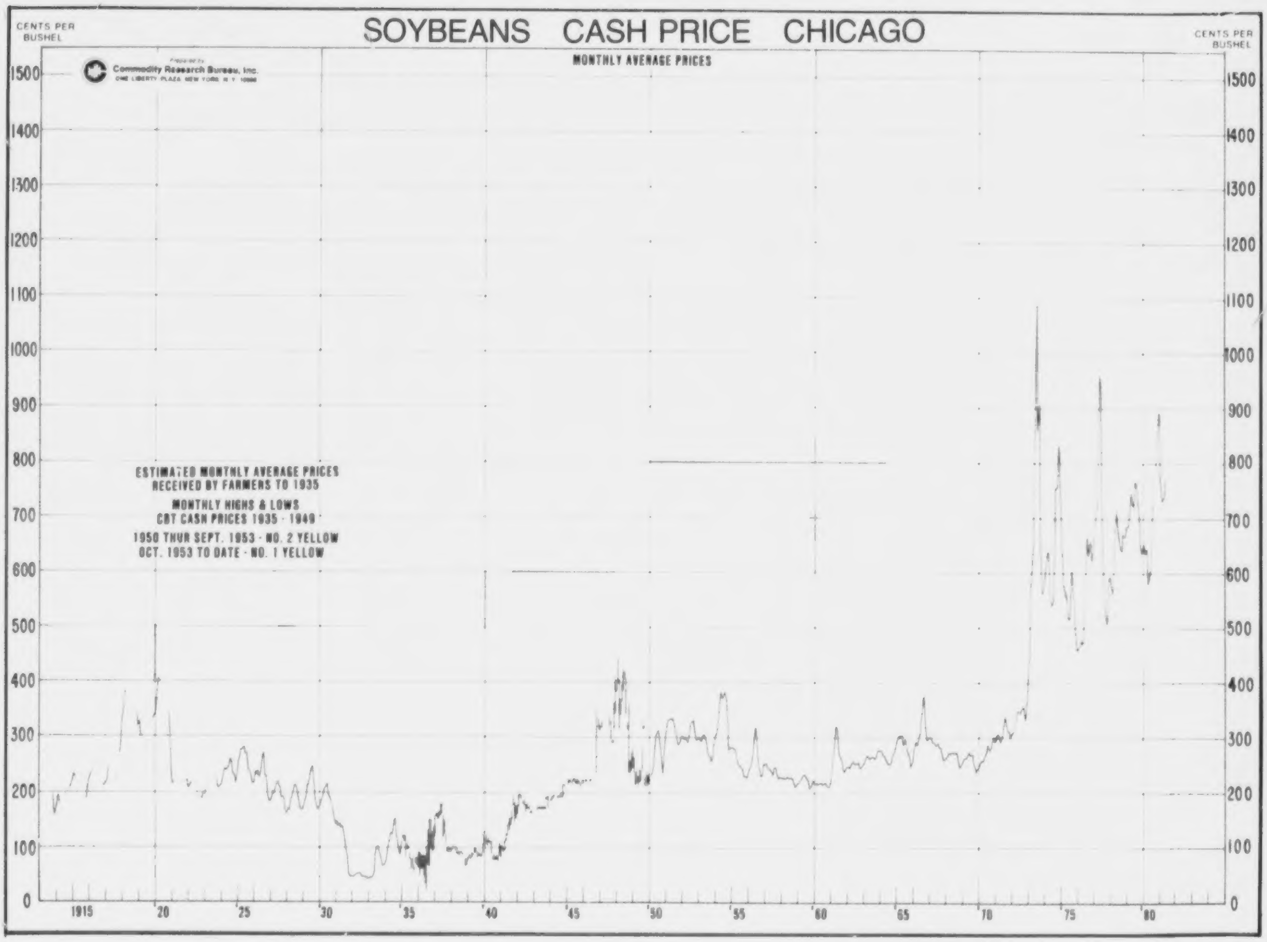
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1968	2,868	2,672	2,594	2,572	4,214	3,878	4,665	5,142	8,392	37,975	10,584	2,807	88,363
1969	2,651	3,776	3,622	3,808	3,671	4,366	5,859	6,988	9,633	36,390	22,796	8,058	111,618
1970	5,876	8,481	8,786	10,648	7,516	12,056	15,063	9,417	7,017	24,277	20,112	14,120	143,369
1971	6,672	6,048	8,164	5,508	6,116	13,053	12,438	6,075	5,237	29,723	13,580	2,358	114,972
1972	2,565	3,904	5,111	3,516	2,023	2,426	2,729	3,859	1,297	17,623	11,080	12,886	69,019
1973	13,106	8,779	6,776	4,267	5,717	3,331	3,354	2,059	1,077	14,946	13,330	3,976	80,718
1974	4,596	5,647	5,712	5,051	5,224	3,964	7,159	4,557	2,348	18,486	7,795	3,070	74,065
1975	1,969	1,390	1,865	1,823	1,843	2,665	4,505	3,066	2,131	25,944	5,988	2,049	55,238
1976	2,449	2,337	3,002	2,146	2,228	3,715	3,640	1,280	3,374	13,927	4,533	1,933	44,564
1977	3,335	3,337	4,736	4,075	6,824	781	152	1,980	1,208	11,960	7,986	4,023	50,397
1978	2,575	1,933	3,346	4,494	7,588	3,986	1,780	3,803	2,856	17,056	8,468	2,353	60,238
1979	2,718	4,007	2,938	2,916	2,669	3,545	2,370	2,034	2,375	20,795	9,360	3,138	58,965
1980													

Source: Chicago Board of Trade

Soybeans Crushed (Factory Consumption) in the U.S. In Millions of Bushels—One Bushel = 60 Pounds

Year	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Total
1968–9	38.2	54.7	55.6	52.2	49.9	45.0	54.6	50.4	54.5	50.6	52.1	48.2	605.9
1969–0	47.5	61.8	62.0	63.1	62.9	58.8	62.9	62.5	67.4	63.7	62.7	62.0	737.3
1970–1	53.3	66.8	65.9	68.1	67.7	60.1	63.6	63.8	63.8	61.1	62.4	63.6	760.1
1971–2	54.5	59.5	59.8	64.0	63.9	60.2	63.9	58.5	63.0	57.1	58.2	57.9	720.5
1972–3	52.2	66.8	70.7	69.2	70.6	64.8	64.4	58.2	61.7	52.2	44.5	46.5	721.8
1973–4	41.4	62.8	71.8	72.8	74.7	70.4	75.8	69.6	71.7	69.4	72.2	68.8	821.3
1974–5	53.6	61.6	60.8	60.2	63.1	54.1	61.0	57.5	53.0	53.1	59.2	64.0	701.3
1975–6	56.5	71.4	71.1	77.8	74.9	69.3	77.9	77.2	79.6	74.6	70.6	64.2	865.1
1976–7	68.8	72.9	73.4	72.7	72.2	71.6	74.4	67.1	61.2	56.2	50.6	49.1	790.2
1977–8	51.9	75.8	85.3	86.6	85.3	75.4	86.5	80.1	82.7	72.4	70.8	73.9	926.7
1978–9[1]	71.4	89.3	89.6	96.4	90.6	82.2	89.0	83.3	86.9	82.8	80.6	76.4	519.5
1979–0[1]	76.0	95.8	101.4	104.4	106.6	100.0	102.0	92.0	94.0	83.0	85.0	83.0	1,123
1980–1[1]	82.0	99.4	98.5	94.1	92.2	79.6							

[1] **Preliminary.** *Source: Bureau of the Census*



Average Cash Price of No. 1 Yellow Soybeans at Chicago (Illinois Processor[1]) In Cents per Bushel

Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Average
1968–9	246	253	259	263	264	264	269	272	269	270	261	249	263
1969–0	238	242	247	255	259	258	264	270	271	289	279	281	263
1970–1	295	300	293	303	306	304	291	303	321	338	329	312	308
1971–2	312	300	308	309	318	337	349	349	347	351	355	348	324
1972–3	333	364	413	446	580	624	652	894	1087	847	900	610	622
1973–4	562	557	592	617	635	629	559	547	551	711	776	764	612
1974–5[1]	830	754	723	638	569	560	555	523	516	560	602	557	632
1975–6	501	471	460	466	477	471	475	523	623	666	631	659	526
1976–7	622	655	686	706	726	825	960	942	825	640	549	516	721
1977–8	507	584	594	573	565	658	681	701	676	662	647	642	624
1978–9	672	668	681	689	728	745	727	721	768	764	728	704	716
1979–0	656	652	653	636	642	607	580	604	610	722	745	813	660
1980–1	827	891	773	757	734	737							
1981–2													

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[1] Illinois points—beginning Oct. 1974. *Source: Consumer & Marketing Service, U.S.D.A.*

Month End Open Interest of Soybeans Futures at Chicago Board of Trade In Millions of Bushels

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	470.3	438.0	499.4	483.9	553.5	491.8	452.8	485.8	562.2	726.6	720.1	775.1
1979	613.9	719.0	642.0	576.1	562.2	584.4	514.4	477.1	534.9	564.7	630.4	704.3
1980	533.2	540.0	502.2	449.6	513.5	615.0	703.5	784.4	880.4	1,069.6	1,102.7	1,064.3
1981	645.7	586.9	565.0	551.4								
1982												

Source: Chicago Board of Trade

Average Price Received by Farmers for Soybeans in the U.S. In Cents Per Bushel

Year	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Average
1975–76	532	492	445	428	446	450	446	452	487	616	673	607	492
1976–77	665	590	611	656	681	706	783	905	924	813	652	548	681
1977–78	517	528	561	568	575	553	620	649	677	669	640	621	588
1978–79	620	626	641	649	658	699	716	706	706	736	736	707	666
1979–80	681	635	630	627	639	620	594	563	576	591	675	718	625
1980–81	759	768	818	726	780	750	759	733					
1981–82													

Source: Crop Reporting Board

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Sugar

World sugar production in the 1980/81 crop year (September/August basis, but including sugar from harvests of some Southern Hemisphere countries which begin prior to September) was forecast by the USDA at 86.1 million tonnes in May 1981, about 1.0 million tonnes below its previous estimate, but still above the 84.6 million tonnes estimated for the 1979/80 season. The 84.6 million tonne world production estimate for 1979/80 was sharply below the 91.0 million tonnes produced in the previous season, reflecting reduced production in India, Mexico, and the Soviet Union which more than offset the gains in European beet sugar output.

World sugar consumption in the 1980/81 season was forecast by the USDA in May 1981 at 89.0 million tonnes, 500,000 tonnes below its earlier forecast and 1.0 million tonnes below 1979/80 estimated usage. The USDA said that increased use of corn sweeteners, mostly in the United States and Japan, relatively high sugar prices and slowing world economic growth, and government decisions leading to rationing or reduced sugar availabilities in some major sugar-using countries were the main reasons for the expected decline in consumption.

The projected production deficit versus consumption of 3.0 million tonnes for the 1980/81 season follows a 5.6 million tonne deficit in 1979/80. However, the USDA said that increased plantings in Europe and output recovery in some major cane-producing countries will likely raise world sugar production in the 1981/82 season beginning in September, but that no substantial stock rebuilding was foreseen.

U.S. Market

U.S. sugar production in 1980/81 was expected to be slightly less than 1979/80's 5.58 million short tons. U.S. sugar deliveries in calendar 1980 dropped sharply to 10.1 million short tons, off about 675,000 tons (raw value) from the 1979 level. Increased deliveries of competitive high fructose corn syrup (HFCS) accounted for much of the decline. Also, sugar inventories of wholesalers, retailers, and industrial users were allowed to fall to lower levels because of high interest rates and higher holding costs. Per capita consumption of refined sugar in 1980, based on sugar deliveries, totaled 85 pounds, more than 6 pounds less than in 1979. Imports of sugar in 1980 dropped 9 percent below the 1979 level. U.S. sugar exports (mostly refined) increased sharply in 1980 to about 650,000 tons (raw value) vs. 18,000 tons in 1979. Mexico was a major buyer in 1980.

U.S. Government Programs

The price support loan program was available for part of the 1977 U.S. sugar crop, and all of the 1978 and 1979 crops.

Import fees for the first quarter of 1981 remained at minimum levels (zero for raw sugar and 0.52 cent per pound for refined sugar). The import duty remained at the statutory minimum of 0.625 cent per pound, 96-degree basis.

The International Sugar Agreement (ISA)

The International Sugar Agreement's governing Council met in London during the week of November 17, 1980, at which meeting the decision was made to raise the Agreement's target price range by 1 cent per pound. The new range is 13 cents to 23 cents per pound. Another action was to set the provisional ISA global export quota for 1981 at 14,298,000 tonnes. This amount was based on estimated free market net import requirements of 19,704,000 tonnes less estimated exports by certain members of 606,000 tonnes, estimated exports by members under special arrangements totaling 50,000 tonnes, and estimated exports from non-members amounting to 4,850,000 tonnes.

The 14,298,000 tonne global export quota for 1981 was to become effective if world sugar prices fell to 17 cents per pound or less. However, members were advised on May 7 when the 15-day average price dropped below the 17¢ level for 5 consecutive days, that the Executive Committee had waived its discretionary powers to impose export quotas at that time. The global export quota of 14,298,000 tonnes was imposed automatically when the average price dropped below 16 cents per pound for 5 days on May 14, 1981. Export quotas theoretically could be cut by 5 percent in the event of a drop in prices below 15 cents per pound, but with the existing quota representing 88 percent of total basic export tonnage, a reduction of this percentage would take quotas below the 85 percent allowed by the Agreement.

Futures Markets

Both world and domestic sugar futures are traded on the Coffee, Sugar & Cocoa Exchange, Inc. in New York. World raw and white sugar futures are traded on the London United Terminal Sugar Market.

World Production of Sugar (Centrifugal Sugar—Raw Value) In Thousands of Metric Tons[3]

Crop Year	Australia Cane	Brazil Cane	China (Mainland)	Cuba Cane	Hawaii Cane	India Cane	Indonesia Cane	Philippines Cane	Poland Beet	W. Germany	United States		U.S.S.R. Beet	Mexico	France	World Total All
											Beet	Cane				
1970–1	2,702	5,642	2,065[4]	6,530	1,286	4,963	800	2,270	1,659	2,264	3,321	1,253	9,904	2,729	2,972	77,739
1971–2	3,015	6,227	2,065[4]	4,837	1,119	4,222	750	2,061	1,887	2,584	3,512	1,206	8,813	2,778	3,530	77,818
1972–3	3,015	6,795	2,065[4]	5,787	1,129	5,040	981	2,673	2,016	2,690	3,663	1,620	8,984	3,053	3,290	83,247
1973–4[3]	2,592	6,959	2,065[4]	5,800	944	4,949	950	2,643	1,817	2,500	2,918	1,253	9,568	2,805	3,255	80,488
1974–5	2,927	7,400	2,400	6,300	1,004	5,794	1,000	2,466	1,557	2,438	2,645	1,334	7,730	2,696	2,948	78,620
1975–6	2,988	6,200	2,311	6,200	953	5,464	1,030	2,875	1,860	2,540	3,646	1,657	7,700	2,698	3,239	81,679
1976–7	3,405	7,500	2,153	6,100	938	6,043	1,068	2,753	1,801	2,734	3,534	1.519	7,350	2,696	2,974	86,263
1977–8	3,322	8,863	2,450	7,200	934	8,201	1,125	2,397	1,819	3,076	2,820	1,497	8,825	3,029	4,268	92,454
1978–9	2,978	7,740	2,675	7,500	962	7,071	1,160	2,347	1,736	2,997	2,984	1,436	9,300	3,058	4,000	90,969
1979–0[2]	3,027	6,968	2,765	6,400	948	5,213	1,307	2,325	1,557	3,088	2,612	1,488	7,800	2,763	4,237	84,587
1980–1[1]	3,300	8,200	2,800	6,000	965	6,917	1,403	2,420	1,190	2,850	2,722	1,501	7,000	2,900	4,280	87,116

[1] Estimated. [2] Preliminary. [3] Data prior to 1973–4 are in THOUSANDS OF SHORT TONS. [4] Average 1969/70–1973/4.

Source: Foreign Agricultural Service, U.S.D.A.

United States Sugar (Cane & Beet) Supply and Utilization In Thousands of Short Tons (Raw Value)

	Supply								Utilization						
	Production			Offshore Receipts									Domestic Disappearance	Military & Civilian	
Year	Cane	Beet	Total	Foreign	Territories	Total	Beginning Stocks	Total Supply	Total Use	Exports	Net Change in Invisible Stocks	Residual	Livestock Feed & Alcohol	Total	Per Capita
1968	2,588	3,039	5,627	5,130	504	5,634	2,941	14,202	11,159	79	291	51	82	10,656	99.2
1969	2,236	3,246	5,482	4,886	342	5,228	3,043	13,753	10,884	82	–273	57	68	10,950	101.0
1970	2,363	3,511	5,874	5,296	353	5,649	2,869	14,392	10,926	66	185	60	83	10,532	96.1
1971	2,386	3,429	5,815	5,587	144	5,731	3,466	15,012	12,189	89	–7	70	61	11,976	108.1
1972	2,481	3,534	6,015	5,459	149	5,608	2,823	14,446	11,623	50	–21	45	62	11,487	102.8
1973	2,708	3,353	6,061	5,329	79	5,408	2,823	14,292	11,646	26	91	69	31	11,429	101.5
1974	2,441	3,221	5,662	5,770	157	5,927	2,646	14,235	11,381	72	305	51	8	10,945	96.5
1975	2,827	3,473	6,300	3,882	96	3,978	2,854	13,132	10,276	216	–277	29	6	10,302	90.2
1976	2,795	4,003	6,798	4,658	203	4,861	2,856	14,515	11,017	76	–24	72	—	10,893	94.6
1977	2,666	3,423	6,089	6,138	102	6,240	3,498	15,827	11,336	22	201	14	—	11,099	95.7
1978	2,535	3,067	5,602	4,683	52	4,735	4,491	14,828	11,074	16	57	108	4	10,899	93.1
1979[1]	2,727	3,067	5,794	5,027	47	5,074	3,754	14,622	10,921	18	44	103	—	10,756	91.1
1980[2]	2,597	2,937	5,534	4,480	153	4,633	3,701	13,868	10,797	523	62	82	—	10,126	84.9

[1] Preliminary. [2] Estimate. *Source: Agricultural Marketing Service, U.S.D.A.*

Sugar Cane for Sugar & Seed and Production of Cane Sugar and Molasses in the United States

			Production				Farm Value		Sugar Production			Molasses Made		
									Raw Value					
Year	Acreage Harvested 1,000 Acres	Yield of Cane per Acre Tons	for Sugar	for Seed	Total	Farm Price $ per Ton	of Cane used for Sugar	of Cane used for Sugar & Seed	Total 1,000 Tons	Per Ton of Cane Lbs.	Refined Basis 1,000 Tons	Blackstrap (80° Brix)	Edible	Total
			1,000 Tons				1,000 Dollars					1,000 Gallons		
1968	606	41.0	24,025	800	24,825	9.37	119,435	125,198	2,447	204	2,286	150,057	2,466	152,589
1969	536	42.2	21,714	901	22,615	9.96	108,380	115,534	2,254	208	2,107	132,337	2,532	134,458
1970	584	41.1	23,055	941	23,996	10.50	132,045	139,688	2,416	210	2,258	138,676	2,121	141,193
1971	648	38.1	23,145	1,027	24,172	11.10	138,617	147,834	2,436	211	2,277	142,522	2,517	144,812
1972	702	40.4	27,239	1,093	28,332	11.70	201,639	211,724	2,740	201	2,561	178,263	2,290	180,553
1973	741	34.9	24,924	903	25,827	20.90	319,503	333,061	2,549	205	2,383	164,001	1,926	167,486
1974	734	33.8	23,721	1,091	25,140	48.50	724,509	771,091	2,512	212	2,347	152,682	1,559	156,355
1975	774	36.6	27,306	1,038	28,344	19.60	349,622	366,370	2,934	214	2,743	177,428	1,560	178,988
1976	747	37.6	26,919	1,201	28,120	13.70	243,703	257,242	2,724	202	2,545	179,180	1,550	180,730
1977	759	35.3	25,730	1,100	26,830	18.50	310,017	327,146	2,684	209	2,508			164,894
1978	744	35.0	24.821	1,176	25,997	19.40	310.205	320.469	2,612	210	2,441			161,810
1979[1]	733	36.2	25,410	1,122	26,532				2,700	203	2,517			164,581
1980[1]	736	38.4	26,935	1,300	28,235				2,618					169,979

[1] Preliminary. *Source: Statistical Reporting Service, U.S.D.A.*

Sugar Beets, Beet Sugar, Pulp, & Molasses Produced from Sugar Beets in the U.S.

	Sugar Beets						Sugar Production		Pulp Production			
	Acreage											
Year of Harvest	Planted	Harv.	Yield Per Har. Acre Tons	Production 1,000 Tons	Price[1] Dollars	Farm Value $1,000	Refined Basis	Equivalent "Raw Value"[2]	Molasses Pulp	Wet Pulp	Dried Pulp	Sugar Beet Act Payments $ Per Ton
	1,000 Acres						In Thousands of Short Tons					
1968	1,476	1,410	18.0	25,363	13.80	350,207	3,255	3,483	1,292	1,248	251	2.16
1969	1,647	1,541	18.0	27,736	12.70	352,868	3,112	3,330	1,359	1,139	255	2.02
1970	1,478	1,413	18.7	26,378	14.80	391,567	3,179	3,401	1,331	1,164	220	2.07
1971	1,406	1,342	20.2	27,096	15.40	416,279	3,320	3,552				2.05
1972	1,420	1,329	21.4	28,410	16.00	455,830	3,387	3,624				2.00
1973	1,280	1,218	20.1	24,499	29.60	725,661	2,990	3,200				2.08
1974	1,252	1,213	18.2	22,123	46.80	1,035,567	2,725	2,916				2.06
1975	1,595	1,517	19.6	29,704	27.60	820,743	3,756	4,019				
1976	1,525	1,479	19.9	29,386	21.00	616,813	3,640	3,895				
1977	1,273	1,216	20.6	25,007	24.20	604,399	2,905	3,108				
1978[3]	1,305	1,269	20.3	25,788	25.20	648,221	3,074	3,289				
1979[3]	1,161	1,120	19.6	21,996			2,691	2,879				
1980[3]	1,232	1,187	19.6	23,275			2,722	2,913				
1981	1,256											

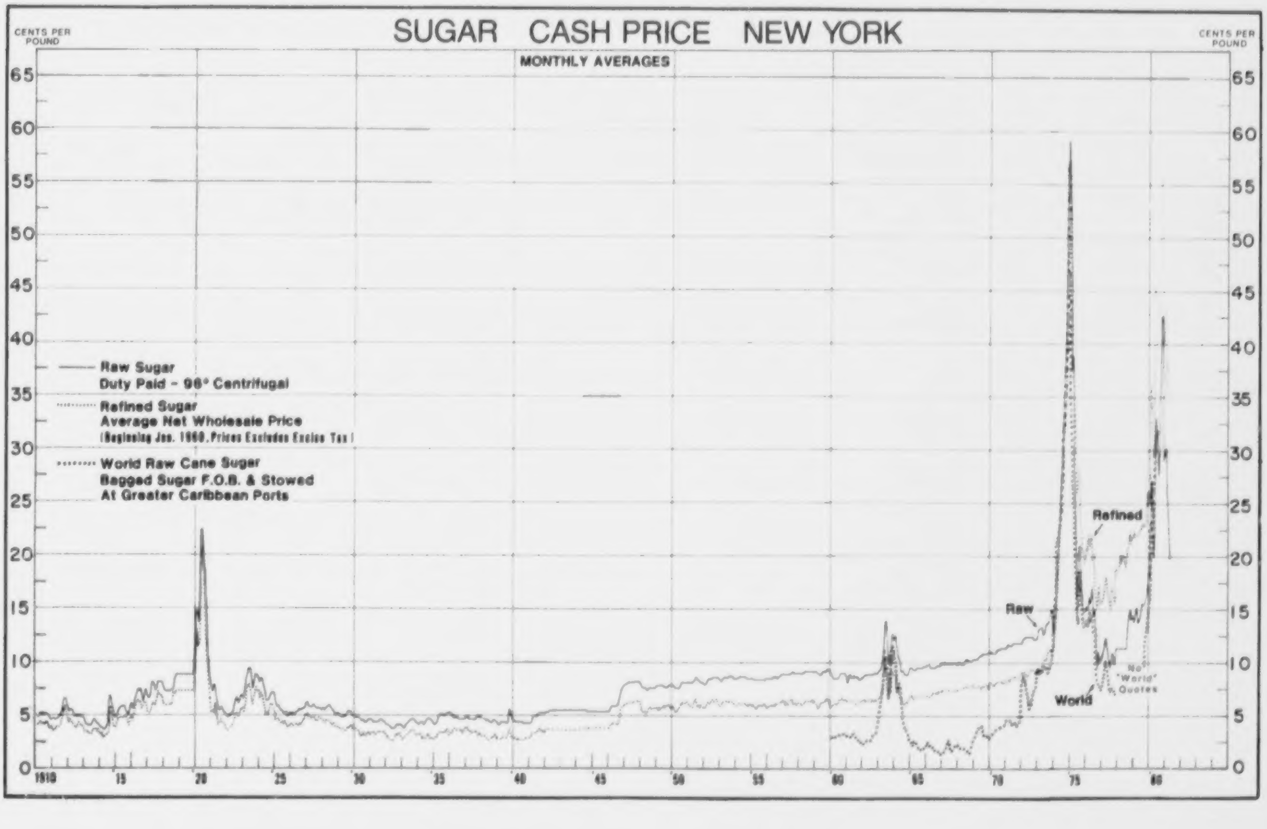
[1] Includes support payments, but excludes Sugar beet payments. [2] Refined sugar multiplied by factor of 1.07. [3] Preliminary.
Source: Statistical Reporting Service, U.S.D.A.

SUGAR

Average Raw Cane Sugar (96°) Prices[1] Duty Paid C.I.F. New York In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1972	9.10	9.02	9.16	8.89	8.76	8.77	9.17	9.33	9.39	9.32	9.03	9.19	9.09
1973	9.38	9.14	9.45	9.65	10.06	10.25	10.25	10.75	10.97	11.15	11.10	11.34	10.29
1974	12.63	17.09	18.11	19.25	23.05	26.30	28.35	32.60	33.71	38.83	57.30	46.74	29.50
1975	37.5	38.8	30.0	28.2	19.5	14.8	19.4	22.5	17.5	15.2	15.5	15.6	22.9
1976	15.4	15.0	16.4	15.6	16.7	14.4	15.0	11.9	9.5	11.2	10.6	10.2	13.5
1977	10.5	11.3	11.7	12.4	11.2	10.0	9.5	11.0	10.8	9.8	11.4	11.4	10.9
1978	11.4	11.4	11.4	11.4	11.4	11.4	11.4	13.5	14.4	15.0	14.2	14.5	14.3
1979	13.8	15.0	15.3	13.9	14.1	14.6	15.7	15.4	15.7	15.9	16.2	18.0	15.3
1980	18.9	27.2	20.0	23.2	33.1	32.4	27.7	35.1	37.2	42.7	40.9	29.1	30.6
1981	30.3	26.7											
1982													

[1] Domestic sugar at N.Y., duty paid. *Source: N.Y. Coffee & Sugar Exchange*



Sugar, Refined—Deliveries by Type or Product of Buyer in the U.S. In Thousands of Cwt.

Year	Bakery & Allied Pdts.[2]	Beverages	Confectionery[3]	Hotels, Restaurants[4]	Ice Cream & Dairy Products	Jams, Jellies, Preserves[5]	Multiple & Other Food Uses	Non-Food Uses	Retail Grocers[6]	Wholesale Grocers[7]	All Other[8]	Total Deliveries	In Consumer Size Pckgs.	To Industrial Users
1971	27,125	47,287	21,046	1,588	11,125	20,575	9,917	1,861	26,580	43,197	1,903	212,204	52,199	138,935
1972	28,987	48,740	21,139	1,693	11,985	19,739	10,158	1,811	26,324	42,057	1,757	214,390	51,136	65,807
1973	29,074	49,387	20,704	1,879	11,901	20,496	10,040	2,221	26,325	41,269	2,125	215,420	50,603	68,338
1974	28,856	46,992	20,374	1,811	11,404	18,981	10,278	2,557	27,072	40,043	2,421	210,788	51,617	66,396
1975[1]	23,757	40,390	15,334	1,423	9,755	14,045	9,359	1,679	24,626	37,089	1,640	185,453	48,188	59,299
1976[1]	24,571	43,263	17,332	1,275	10,353	13,644	9,793	1,954	25,404	40,684	2,595	200,868	48,790	64,455
1977[1]	26,641	47,918	18,391	1,391	10,914	14,201	10,458	2,048	25,235	40,668	2,901	207,046	49,196	70,600
1978[1]	25,657	51,540	17,895	2,078	10,380	13,444	8,142	3,167	23,363	39,259	3,140	200,540	45,342	67,352
1979[1]	24,718	47,069	17,621	2,038	9,198	12,887	9,294	2,463	24,284	39,624	3,358	198,689	49,192	67,156
1980														

[1] Preliminary. [2] Cereals and cereal products. [3] And related products. [4] And institutions. [5] Canned, bottled & frozen foods. [6] Chain stores, supermarkets. [7] Jobbers, sugar dealers. [8] Including Gov't. agencies. *Source: Stat. Rep. Serv., U.S.D.A.*

World Stocks of Centrifugal Sugar at Start of Grinding Season In Thousand Metric Tons[2] (Raw Value)

Sugar-Making Season	Australia June 1	Brazil June 1	France Oct. 1	W. Germany Oct. 1	India Nov. 1	Italy Aug. 1	Japan Oct. 1	Mexico Nov. 1	Netherlands Oct. 1	Philippines Oct. 1	Sweden Aug. 1	Iran Oct. 1	United Kingdom Sept. 1	U.S. & Ins. Areas Oct. 1	Total
1971–2	475	1,430	1,021	861	1,554	263	493	486	43	251	86	550	543	1,450	12,190
1972–3	279	1,377	1,080	941	659	287	591	334	72	62	160	578	841	1,204	11,136
1973–4[3]	253	1,249	980	854	598	260	536	303	65	56	145	524	763	1,092	10,101
1974–5	408	791	143	757	657	357	259	327	50	152	157	385	629	1,135	8,368
1975–6	155	1,591	269	137	843	500	267	547	96	405	139	191	208	2,444	9,902
1976–7	328	1,746	174	165	737	337	98	642	139	744	138	207	139	2,399	10,574
1977–8	534	1,286	706	202	732	562	104	198	199	1,607	127	304	253	2,718	12,820
1978–9	383	1,516	947	305	1,448	976	350	134	207	1,290	140	264	234	3,375	15,990
1979–0[1]	577	2,648	911	405	3,683	940	446	123	187	1,110	136	358	188	3,330	19,631
1980–1															

[1] Preliminary. [2] Data prior to 1973–74 are in THOUSANDS OF SHORT TONS. *Source: Foreign Agricultural Service, U.S.D.A.*

Sugar Stocks of Primary Distributors in the U.S. at Beginning of Month In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1970	2,796	2,858	2,827	2,671	2,636	2,424	2,104	1,726	1,384	1,046	1,414	2,202
1971	2,792	3,003	2,943	2,701	2,660	2,524	2,157	1,932	1,629	1,450	1,582	2,134
1972	2,687	3,008	3,059	2,898	2,874	2,672	2,343	2,032	1,532	1,204	1,638	2,217
1973	2,710	2,941	3,038	2,777	2,831	2,604	2,291	2,040	1,454	979	1,251	1,902
1974	2,583	2,488	2,509	2,493	2,174	2,034	1,949	1,613	1,200	950	1,202	1,822
1975	2,800	3,067	2,970	2,836	2,521	2,299	1,946	1,275	1,032	958	1,415	2,088
1976	2,731	3,171	3,201	2,938	2,778	2,569	2,314	2,038	1,689	1,324	1,660	2,504
1977[1]	3,324	3,624	3,758	3,430	3,302	3.191	2,782	2,424	2,019	1,951	2,259	3,009
1978[1]	4.349	4,352	4,104	3,850	3,451	3,326	3,059	2,729	2,264	2,054	2,324	3,084
1979[1]	3,621	3,927	4,034	3,662	3,644	3,559	3,280	2,950	2,220	1,977	2,296	2,962
1980[1]	3,494	3,606	3,563	3,384	3,071	2,841	2,510	2,204	1,866	1,548	1,679	2,345
1981[1]	2,934	3,325										
1982												

[1] Preliminary. *Source: Commodity Stabilization Service, Sugar Division*

SUGAR

United States Production & Imports of Edible Sirups In Thousands of Gallons

	Production[2]								Imports				
	Sirups												
Year	Corn	Cane	Sorghum	Maple	Refiners'	Edible Molasses	Honey	Total	Maple Sirup	Edib. Molas. & Cane Sirup	Honey	Shipm. From Terr.	Total
1971	304,000	—	—	962	1,883	2,517	16,708	326,070	577	2,470	967	—	4,014
1972	387,880	—	—	1,099	2,077	2,290	18,210	411,556	710	1,694	3,291	—	5,695
1973	451,264	—	—	857	2,309	1,926	20,193	476,549	803	2,935	900	—	4,638
1974	498,313	—	—	1,087	2,564	1,559	15,866	519,389	801	2,508	2,196	—	5,505
1975	561,215	—	—	1,207	2,482	2,114	16,823	583,841	607	2,483	3,917	—	7,007
1976	615,498	—	—	927	2,403	2,574	16,756	638,158	886	3,188	5,608	—	9,682
1977	695,196	—	—	1,221	2,197	2,538	15,076	716,228	867	1,773	5,396	—	8,036
1978	751,908	—	—	1,154	2,571	2,750	19,466	777,750	811	2,077	4,727	—	7,615
1979[1]	845,741	—	—	1,219	2,524	2,900	20,039	872,423	857	2,944	4,947	—	8,748
1980													

[1] Preliminary. [2] Production of cane sirup, sorghum sirup, & edible molasses is of the fall of the preceding year. *Source: Agricultural Marketing Service, U.S.D.A.*

U.S. Exports & Domestic Consumption of Edible Sirups, Corn Sugar & Sugar In Thousands of Gallons

				Indicated Domestic Consumption					Per Capita Consumption in Pounds				Total Sugar Consumption Mil. Tons
	Exports			Sirups									
Year	Corn Sirup	Honey	Total	Corn	Maple	Cane & Refin. & Edib. Mol.	Honey	Total	Corn Sweeteners[3]	Corn Sugar	Saccharin	Sugar[2]	
1970	1,324	688	2,012	290,676	2,066	5,981	18,787	317,510	19.3	5.0	5.8	101.8	11.2
1971	1,324	640	1,964	302,676	1,539	6,870	17,035	328,120	20.9	5.0	5.1	102.4	11.3
1972	1,205	346	1,551	386,675	1,809	6,061	21,155	415,700	21.3	4.8	5.1	102.8	11.5
1973	1,377	1,484	2,861	449,887	1,660	7,170	19,609	478,326	23.6	5.2	5.1	101.5	11.4
1974	1,736	386	2,122	496,577	1,888	6,631	17,676	522,772	25.3	5.3	5.9	96.5	10.9
1975	1,070	337	1,407	560,145	1,814	7,079	20,403	588,441	27.8	5.5	6.2	90.2	10.3
1976	1,674	396	2,070	613,824	1,813	8,165	21,968	645,770	30.1	5.5	6.1	94.6	10.9
1977	1,543	466	2,009	693,653	2,088	6,508	20,006	722,255	31.7	5.5	6.6	95.7	11.1
1978	1,694	679	2,373	750,115	1,965	7,398	23,514	782,992	34.3	5.5	6.9	93.1	10.9
1979[1]	1,211	747	1,958	844,350	2,076	8,368	24,239	879,213	37.2		7.0	91.1	10.7
1980[1]									41.1		7.1	84.9	10.0

[1] Preliminary. [2] Refined cane & beet sugar. [3] Corn Sirup & Dextrose. *Source: Agricultural Marketing Service, U.S.D.A.*

Sugar Deliveries and Stocks in the United States In Thousands of Short Tons, Raw Value

	Deliveries by Primary Distributors							Stocks (January 1)					
Year	Cane[1] Sugar Refineries	Beet Sugar Factories	Importers of Direct Consumption Sugar	Cane Sugar Mills[1]	Total	Sales of Refined Sugar For Export	Total Domestic Consumption[2]	Cane Sugar Refineries	Beet Sugar Factories	Importers of Direct-Consumption	Refiners' Raws	Mainland Cane Mills	Total
1970	7,158	3,336	144	57	10,695	66	11,163	251	1,321	9	695	412	2,799
1971	7,306	3,213	111	51	10,681	89	11,345	237	1,266	4	804	376	2,792
1972	7,326	3,281	87	70	10,764	50	11,487	255	1,258	1	972	116	2,710
1973	7,334	3,282	75	81	10,772	26	11,429	233	1,280	3	998	100	2,583
1974	7,590	2,826	56	54	10,526	28	10,946	257	1,130	1	886	211	2,799
1975	6,237	3,068	83	65	9,453	147	9,304	276	1,314	1	428	458	2,731
1976	6,534	3,572	76	15	10,197	68	10,895	231	1,490	0	776	509	3,341
1977	7,026	3,208	172	17	10,495	35	11,100	261	1,661	0	1,678	556	4,349
1978	7,476	3,198	193	19	10,900	48	10,849	286	1,560	85	964	641	3,621
1979[3]	7,487	3,191	90	19	10,788	73	10,714	257	1,205	—	541	1,068	3,503
1980[3]	7,464	2,866	8	48	10,597	558	10,040	260	1,275	—	716	600	2,871
1981													

[1] Sugar for direct consumption only. [2] Includes deliveries for U.S. military forces at home and abroad. [3] Preliminary. *Source: Department of Agriculture*

Centrifugal Sugar (Raw Value) Imported into Selected Countries In Thousands of Metric Tons

Year	Algeria	Canada	Chile	France	W. Germany	Israel	Japan	Malaysia	Morocco	Iran	Un. Kingdom	China	United States	U.S.S.R.	World Total[3]
1969	200	946	294	106	181	118	2,228	361	253		2,149		4,432	1,335	18,569
1970	207	949	100	60	193	118	2,600	380	273		1,839	530	4,711	3,005	21,372
1971	261	899	195	108	177	139	2,427	330	246		2,134	464	4,821	1,536	20,708
1972	230	908	233	128	125	161	2,777	356	222	170	2,163	749	4,719	1,924	20,981
1973	278	965	297	100	140	80	2,372	351	278	297	2,050	736	4,781	2,631	22,231
1974	277	901	174	158	100	157	2,771	352	278	226	2,269	411	5,238	1,856	21,860
1975	360	998	178	182	196	150	2,473	345	268	626	2,346	241	3,490	3,237	20,508
1976	354	895	98	136	169	131	2,439	336	263	626	2,101	638	4,136	3,760	22,593
1977	431	1,064	342	110	108	153	2,708	336	389	277	1,870	1,676	5,290	4,776	26,362
1978[1]	411	1,083	295	117	152	195	2,284	398	294	875	1,689	1,438	3,616	3,993	24,225
1979															

[1] Preliminary. [2] Excludes U.S. trade with Territories. *Source: Foreign Agricultural Service, U.S.D.A.*

Centrifugal Sugar (Raw Value) Exported from Selected Countries In Thousands of Metric Tons

Year	Australia	Brazil	Czechoslovakia	Cuba	Dom. Republic	France	Thailand	Mauritius	Peru	Philippines	South Africa	Taiwan	Un. Kingdom	U.S.S.R.	World Total[2]
1968	1,624	1,026	312	4,613	610	718	*1968–*	596	467	985		670	224	1,461	20,511
1969	2,064	1,099	300	4,799	618	582	*72*	596	268	1,020		531	203	1,388	19,421
1970	1,389	1,126	350	6,906	793	900	*Avg.*	575	435	1,237	790	410	203	1,517	22,064
1971	1,762	1,191	350	5,511	1,011	1,168	*(133)*	489	432	1,422	828	523	284	1,401	21,455
1972	2,010	2,054	229	4,140	1,099	1,425	419	670	481	1,240	1,168	489	330	64	21,714
1973	2,086	2,820	225	4,797	1,031	1,653	276	701	407	1,474	892	487	299	46	22,839
1974	1,759	2,357	189	5,491	1,055	1,202	444	726	462	1,542	779	553	328	103	23,160
1975	1,969	1,746	227	5,744	975	994	595	498	422	972	809	409	385	59	21,112
1976	2,016	1,252	71	5,764	977	1,422	1,124	584	284	1,467	860	519	285	79	22,818
1977	2,558	2,487	171	6,238	1,117	1,816	1,657	674	434	2,443	1,384	599	178	87	28,626
1978[1]	2,002	1,925	306	7,231	937	2,357	1,029	613	266	1,142	719	364	93	174	25,456
1979															

[1] Preliminary. [2] Excludes U.S. trade with Territories. *Source: Agricultural Marketing Service, U.S.D.A.*

Average Wholesale Refined Cane Sugar Prices at New York (Excludes Excise Tax) In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1970	11.1	10.9	10.9	10.9	10.9	11.3	11.3	11.3	11.4	11.4	11.4	11.4	11.2
1971	11.4	11.4	11.7	11.6	11.6	11.6	11.8	11.8	11.8	11.8	11.8	11.8	11.7
1972	11.8	12.2	12.2	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.2	12.2	12.3
1973	12.2	13.2	13.2	13.3	12.7	12.7	13.2	13.7	13.7	14.1	15.0	12.8	13.3
1974	14.3	16.1	20.0	20.0	24.8	28.5	31.9	33.8	39.5	40.8	54.9	59.2	32.0
1975	51.8	47.9	41.0	36.1	31.9	25.9	26.8	28.3	23.2	20.5	20.7	19.4	31.1
1976	20.9	20.3	22.1	21.0	22.2	19.7	20.4	17.1	15.2	17.2	16.0	15.6	19.0
1977	16.0	16.7	17.1	18.1	17.2	15.7	15.1	17.2	16.5	15.5	19.1	18.5	16.9
1978	18.7	20.1	19.3	20.1	20.0	19.8	19.1	20.5	21.3	22.3	21.4	22.0	20.4
1979	22.3	21.9	22.0	22.2	22.0	22.5	22.6	23.2	22.9	22.9	23.4	26.1	22.8
1980	25.0	36.4	29.5	31.5	42.2	45.2	39.3	44.2	41.3	56.0	55.0	40.3	40.5
1981	43.2	38.3											

Source: Sugar Division, Commodity Stabilization Service

SUGAR

Average Refined Cane Sugar[1] (Wholesale)—Northeast In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1969	2.95	3.23	3.70	3.76	3.78	3.95	3.72	3.18	3.10	3.12	3.08	2.86	3.37
1970	3.12	3.23	3.44	3.62	3.75	3.82	3.86	3.89	3.93	3.99	4.18	4.16	3.75
1971	4.73	4.83	4.71	4.61	4.35	4.14	4.20	4.37	3.99	4.18	4.20	5.95	4.52
1972	8.25	8.62	8.73	7.29	7.01	6.58	5.58	6.28	7.04	7.42	7.25	9.08	7.43
1973	9.40	9.06	8.89	9.06	9.67	9.77	9.81	9.09	9.01	9.56	10.14	11.83	9.61
1974	15.32	21.28	21.27	21.77	23.65	23.67	25.40	31.45	34.35	39.63	57.17	44.97	29.99
1975	38.32	33.72	26.50	24.06	17.38	13.83	17.06	18.73	15.45	14.09	13.40	13.29	20.49
1976	14.04	13.52	14.92	14.06	14.58	12.99	13.21	9.99	8.16	8.03	7.91	7.54	11.58
1977	16.70	16.94	17.45	18.52	17.52	16.40	16.13	17.38	16.57	16.35	18.50	18.88	17.28
1978	19.85	20.54	20.03	20.18	20.31	20.13	19.90	20.70	21.83	22.65	22.05	22.27	20.87
1979	22.27	22.44	22.54	22.35	22.53	22.71	22.96	23.79	23.50	23.34	23.48	26.47	23.20
1980	27.51	35.00	29.48	31.55	41.96	43.53	39.92	44.15	48.05	55.06	52.84	42.86	40.99
1981													

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[1] Prices are those under No. 8 contract which is for bagged sugar f.o.b. and stowed at Greater Caribbean ports (including Brazil) (No. 11 beginning Jan. 1971, bulk sugar.) *Source: Agricultural Stabilization and Conservation Service, U.S.D.A.*

United States Deliveries[1] of All Sugar by Primary Distributors In Thousands of Short Tons, Raw Value

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1968	763	752	841	834	943	953	1,028	1,117	1,029	932	821	1,077	11,089
1969	704	620	919	834	933	976	1,019	1,058	1,077	928	806	929	10,804
1970	827	795	944	880	948	1,049	1,023	1,089	1,093	932	833	1,048	11,459
1971	727	718	1,026	860	894	1,087	1,034	1,121	1,123	947	903	997	11,439
1972	823	727	1,058	811	978	1,096	1,001	1,167	1,106	865	855	1,039	11,528
1973	787	740	1,058	892	988	1,063	1,027	1,203	1,026	942	890	919	11,538
1974	959	867	924	901	1,040	990	1,060	1,135	1,003	1,045	879	469	11,273
1975	514	552	693	832	870	961	1,205	1,005	936	916	767	877	10,127
1976	769	778	980	881	928	994	986	1,038	1,055	858	827	831	10,926
1977	828	761	1,017	896	875	1,027	975	1,127	1,001	913	958	829	11,207
1978	764	772	927	861	888	1,028	901	1,109	1,014	888	849	848	10,849
1979[2]	835	771	960	808	890	944	919	1,099	856	921	874	837	10,714
1980[2]	782	829	843	765	936	875	907	900	905	808	701	864	10,115
1981													

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[1] Includes for domestic consumption and for export. [2] Preliminary. *Source: Department of Agriculture*

Month End Open Interest of World Sugar (#11) Futures at New York In Contracts

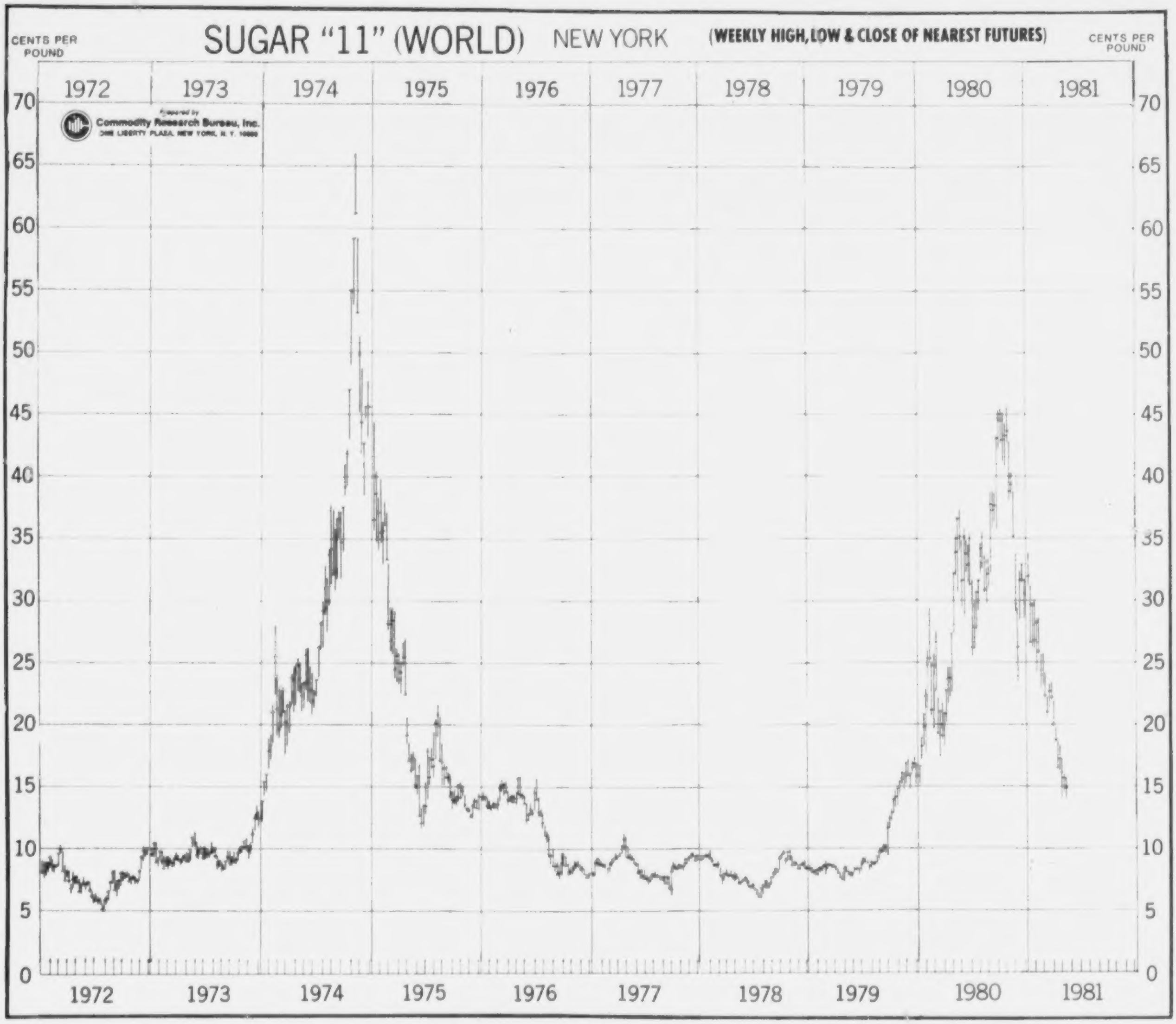
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1978	41,918	32,736	30,260	31,558	34,902	34,186	35,419	34,381	30,702	31,290	30,439	31,498
1979	35,004	34,529	36,200	31,824	36,521	39,646	44,938	58,184	61,442	73,701	87,182	92,007
1980	103,041	87,843	68,667	61,126	69,666	68,554	68,996	70,993	71,316	79,313	76,754	65,327
1981	61,522	57,087	59,025	54,898								
1982												

Source: Coffee, Sugar & Cocoa Exch., Inc., N.Y.

Volume of Trading of World Sugar (#11) Futures at New York In Contracts

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1978	61,854	70,103	86,634	79,359	65,623	98,323	75,940	116,271	115,808	99,632	75,243	71,983	1,016,773
1979	72,961	107,951	76,267	82,804	64,224	132,200	121,474	142,006	192,220	255,858	278,458	256,919	1,783,342
1980	381,805	354,441	338,118	245,233	309,417	277,846	271,884	279,149	317,170	295,673	250,627	255,379	3,576,702
1981	223,217	237,286	212,519	207,859									
1982													

Source: Coffee, Sugar & Cocoa Exch., Inc., N.Y.



SUGAR "11" (WORLD) NEW YORK (WEEKLY HIGH, LOW & CLOSE OF NEAREST FUTURES)

High, Low & Closing Prices of March World Sugar (#11) At New York In Cents per Pound

Year of Delivery		Year Prior to Delivery													Delivery Year		Life of Delivery Range
		Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	
1978	High	959	9.78	9.54	9.94	11.06	10.25	9.42	9.12	9.12	9.17	9.00	9.28	9.60	9.87	9.40	11.06
	Low	9.24	9.00	8.78	8.99	9.72	9.16	8.74	8.11	8.33	7.96	8.24	8.10	8.95	9.02	8.40	7.96
	Close	9.45	9.35	9.10	9.72	10.30	9.19	9.16	8.82	9.07	8.33	8.63	9.27	9.40	9.41	8.41	—
1979	High	11.03	11.03	10.67	10.18	9.53	9.11	8.95	7.70	8.14	9.38	9.88	9.38	9.04	8.58	8.74	11.03
	Low	10.56	10.56	10.10	8.64	8.78	8.32	7.72	6.55	6.89	8.22	8.70	8.37	8.27	7.91	7.94	6.55
	Close	10.90	10.68	10.13	9.43	9.04	8.72	7.75	6.90	8.11	9.23	9.42	8.48	8.43	8.22	8.12	—
1980	High	10.27	9.94	10.30	10.15	9.74	9.72	10.14	10.58	10.91	12.10	14.64	16.91	17.40	22.05	29.45	29.45
	Low	9.76	9.44	9.71	9.55	9.12	9.20	9.29	9.74	9.94	10.50	11.56	14.16	14.85	15.10	19.75	9.12
	Close	9.86	9.75	10.09	9.74	9.45	9.38	9.96	10.07	10.69	11.56	14.08	16.86	16.31	22.01	23.20	—
1981	High	17.06	22.42	28.50	30.08	28.00	39.45	39.38	38.35	37.30	42.20	45.05	45.75	33.75	33.85	28.60	45.75
	Low	15.50	15.56	22.35	21.70	22.60	28.00	33.30	28.17	32.40	33.90	40.85	35.05	24.50	26.15	23.00	13.75
	Close	16.41	22.38	27.37	23.53	27.20	37.94	38.34	32.25	35.07	41.16	43.34	35.11	30.58	26.79	23.25	—
1982	High	28.20	27.68	26.18	22.20	20.30											
	Low	23.75	23.85	22.10	19.35	16.65											
	Close	25.63	24.50	22.13	20.08	17.43											

Source: Coffee, Sugar & Cocoa Exch., Inc., N.Y.

Sulfur

U.S. sulfur demand exceeded domestic output in 1980, according to the Bureau of Mines. The industrial demand for sulfur decreased 4 percent and the demand for sulfur in fertilizer manufacturing was essentially unchanged from 1979. Similar conditions prevailed in the rest of the world. U.S. production, shipments, producers' stocks, and exports all decreased from 1979 levels.

The domestic production of sulfur in all forms in 1980 was 11.80 million tonnes vs. 12.10 million tonnes in 1979, a decrease of 2 percent.

Imports of elemental sulfur were above those in 1979 which were 2.49 million tonnes. Canada supplied 60 percent and Mexico 40 percent of the imports in 1980.

Price levels for elemental sulfur in 1980 were 60 percent higher than in 1979.

World Production of Elemental Sulfur (Native & Other Elemental [All Forms]) In Thousands of Metric[4] Tons

Year	Argentina	Spain	Chile	China	France[3]	West Germany	Canada	Italy	Japan	Mexico	Poland	USSR	Israel	Turkey	United States	World Total
1972	42		77	N.A.	1,703	216	6,839	164	491	929	2,881	3,838	10	21	9,240	28,209
1973	35	1,207	30	N.A.	1,826	538	7,998	1,151	2,723	1,646	3,741	7,520	10	66	10,921	47,437
1974	47	1,393	55	N.A.	2,068	1,284	7,772	776	2,765	2,312	4,326	7,770	8	98	11,419	50,345
1975	32	1,349	47	N.A.	1,962	1,262	7,417	692	2,450	2,181	5,001	7,854	10	90	11,259	49,397
1976[4]	39	1,180	48	1,350	1,968	1,363	7,261	612	2,648	2,225	5,210	9,140	10	128	10,878	50,888
1977	47	1,238	61	1,470	2,160	1,602	7,513	661	2,825	1,936	5,150	9,740	10	118	10,727	52,093
1978[1]	54	1,201	62	1,650	2,220	1,601	7,247	596	2,727	2,053	5,241	10,550	10	198	11,175	53,399
1979[1]	55	1,293	60	1,800	2,250	1,640	6,969	596	2,780	2,390	5,370	10,550	10	220	12,101	54,834
1980[2]		1,300			2,250	1,700	7,000	600	2,800	2,400					11,800	55,000

[1] Preliminary. [2] Estimated. [3] Content of ore. [4] Data prior to 1976 are in THOUSANDS OF LONG TONS. *Source: Bureau of Mines*

Salient Statistics of Sulfur in the United States In Thousands of Metric[6] Tons of Sulfur Content

	Production of													
	Native Sulfur[2]													
		Mines												
Year	Frasch-Process Total	Louisiana	Texas	Recovered Elemental Brimstone	Pyrites (Includ. Coal Brasses)	By-product Sulfuric Acid[3]	Other Sulf. Acid Compounds	Production (All Forms)	Imports—Pyrites & Sulfur	Producers' Stocks Dec. 31[4]	Exports (Sulfur)	Apparent Consumption (All Forms)	Value $ Metric Ton Elem. Sulfur F.O.B. Mine/Plant
1972	7,290	3,534	3,755	1,950	283	546	149	10,218	1,188	3,796	1,852	9,854	17.03
1973	7,605	3,311	4,294	2,416	212	600	88	10,921	1,222	3,927	1,776	10,235	17.84
1974	7,901	3,308	4,593	2,632	162	654	70	11,419	2,150	3,957	2,663	10,818	28.88
1975[6]	7,327	3,119	4,208	3,017	241	779	76	11,440	1,927	5,208	1,316	10,773	45.63
1976	6,365	2,527	3,838	3,188	291	957	78	10,879	1,755	5,652	1,217	10,941	45.72
1977	5,915	2,461	3,454	3,624	169	960	59	10,727	2,009	5,557	1,088	11,657	44.38
1978	5,648	1,928	3,720	4,062	301	1,103	61	11,175	2,177	5,345	827	12,600	45.17
1979[1]	6,357	2,460	3,897	4,070	400	1,167	107	12,101	2,494	4,239	1,963	13,739	55.75
1980[5]	6,390			3,978					2,523	3,090	1,673	13,500	89.25

[1] Preliminary. [2] Or sulfur ore. [3] Basis 100%—produced at Cu, Zn, & Pb plants. [4] Frasch & recovered sulfur. [5] Estimates. [6] Data prior to 1975 are in THOUSANDS OF LONG TONS. *Source: Bureau of Mines*

Sulfur Consumption & Foreign Trade of the United States In Thousands of Metric[5] Tons

		Apparent Consumption of Sulfur in All Forms[3]									Foreign Trade			
											Exports		Imports	
Year	Net Import Reliance as a % of Apparent Consumption	Native Sulfur (Frasch)	Recovered Sulfur Sales	Total Pyrites	Smelter Acid Prod.	Other Prod.[2]	Total	Imports of Recovered Sulfur	Sales to Consumers of Native Sulfur	Imports of Native Sulfur	Quantity	Value Ths. $	Quantity	Value Ths. $
1972		6,030	1,927	333	546	149	9,854	869	7,613	269	1,852	33,687	1,188	16,288
1973		5,964	2,451	212	600	88	10,235	920	7,438	302	1,776	35,791	1,222	14,871
1974		6,251	2,547	162	654	70	10,818	1,196	7,898	954	2,663	97,345	2,150	51,124
1975[5]		5,841	2,929	241	779	76	10,773	945	6,175	982	1,316	71,801	1,927	70,848
1976	—	5,480	3,196	291	957	78	10,941	1,012	5,954	743	1,217	63,584	1,755	59,494
1977	6	5,723	3,627	169	960	59	11,657	1,228	6,030	781	1,088	52,111	2,009	65,154
1978	12	5,902	4,088	301	1,103	61	12,600	1,185	5,736	993	827	34,667	2,177	75,671
1979[1]	11	6,773	4,108	400	1,167	107	13,739	1,265	7,507	1,229	1,963	142,966	2,494	94,147
1980[4]	13		4,030				13,500				1,673	185,866	2,523	138,852

[1] Preliminary. [2] Includes hydrogen sulfide, liquid sulfur dioxide. [3] Crude sulfur equivalent. [4] Estimate. [5] Data prior to 1975 are in THOUSANDS OF LONG TONS. *Source: Bureau of Mines*

Sunflowerseed and Oil

World production of sunflower seeds in 1980/81 was estimated by the USDA at 12.9 million tonnes, 15 percent below 1979/80 production of 15.2 million, but 14 percent above the 1974/75–1978/79 average of 11.3 million. The 1980/81 decline in production reflected reduced output in all three major producing areas: compared with the previous season, U.S.S.R. production declined by 17 percent, U.S. production by 43 percent, and Argentine production by 10 percent. The lower U.S. production was the result of adverse weather and reduced acreage. Adverse weather reduced the U.S.S.R. crop size, while the lower Argentine production resulted from a shift away from sunflower seeds to more profitable corn and soybean crops. U.S. exports increased continually from the mid-1970s to 1980. Western Europe provides the most important market for U.S. exports.

Sunflower seed is relatively high in oil content (40 percent oil, 55 percent meal) compared to other oilseeds (soybeans—18 percent oil, 80 percent meal), and therefore its meal content is relatively less important. In addition, sunmeal (including hulls) has a 28 percent protein content and dehulled sunmeal has a 42 percent protein content vs. the 44 and 48 percent protein content of soybean meals.

U.S. sunflower seed supplies for 1980/81 (September-August) were estimated at 2.9 million tonnes vs. 3.6 million in 1979/80. The 1980/81 U.S. crop was estimated at 1.99 million tonnes compared with 3.48 million the previous season. The lower 1980/81 production was expected to result in an August 31, 1981 carryover of 0.365 million tonnes, vs. 1.073 million after the record large production in 1979/80.

Sunflower oil prices in 1979/80 averaged $560 per tonne versus $728 per tonne in 1978/79. Price estimates were for around $560 per tonne in 1980/81.

The sunflower crushing industry is expanding rapidly. A large new sunflower crushing plant in North Dakota came on stream in fall 1980, the first plant in the U.S. designed specifically to crush sunflower seed. The annual sunflower seed crushing capacity in the northern producing areas was estimated at 1.3 million tonnes in 1980/81, about one-third more than in 1979/80.

Government Programs

USDA determined that no price support program for the 1980 crop of sunflower seed was necessary.

Futures Markets

Sunflower seed futures are traded on the Minneapolis Grain Exchange.

Sunflower Seed Statistics in the United States

					Supply				Disappearance					
Crop Year	Acres Harvested Ths. Hectares	Yield per Harv. Acre Tonne	Farm Price $ Metric Ton	Value of Production Mil. $	Production	Imports	Stocks Sept. 1	Total	Crushings	Exports	Non-Oil Usage	Seed	Residual	Total
					In Thousands of Metric Tons									
1975–6	481	1.13	238		544	2	33	546	180	273	91	2	–82	546
1976–7	425	1.17	243	94.2	499	2	501	35	337	103	3	11		478
1977–8	959	1.40	224	280.4	1,330	3	23	1,356	219	942	113	5	175	1,279
1978–9	1,192	1.53	237	413.5	1,823	7	77	1,907	292	1,366	150	9		1,817
1979–0[1]	2,305	1.51	195	641.3	3,484	10	130	3,584	547	1,820	137	7		2,537
1980–1[1]	1,597	1.14	240		1,816	11	1,073	2,900	650	1,750	125	10		2,535
1981–2[1]							365							

[1] Preliminary. *Source: Economics Services; U.S.D.A.*

Sunflower Seed Oil Statistics in the United States In Millions of Pounds

	Supply			Disappearance			
Crop Year Begin. Oct.	Stocks Oct. 1	Production	Total	Exports & Shipments	Domestic Disappearance	Total	Price $ per Metric Ton (Crude Mpls.)
1975–6	—	72	72	48	16	64	—
1976–7	8	14	22	15	7	22	243
1977–8	—	86	86	34	49	83	
1978–9	3	115	118	41	70	111	728
1979–0	7	224	231	86	96	182	600
1980–1[1]	49	260	309	130	125	255	560
1981–2[2]	54						

[1] Preliminary. [2] Estimate. *Source: Economics Services; U.S.D.A.*

World Production of Sunflower Seed In Thousands of Metric Tons

Crop Year	Argentina	Australia	Bulgaria	Canada	China	France	Hungary	Romania	South Africa	Spain	Turkey	United States	USSR	Yugoslavia	World Total
1977–8	1,600	80			230							1,333	5,900		12,880
1978–9	1,430	186	369	120	280	82	223	816	320	470	485	1,823	5,333	539	12,770
1979–0[1]	1,505	159	415	218	340	159	416	889	332	500	550	3,484	5,414	525	15,267
1980–1[2]	1,350	143	415	166	700	220	425	750	375	502	630	1,816	4,500	306	12,652

[1] Preliminary. [2] Estimate. *Source: Foreign Agricultural Service, U.S.D.A.*

Tall Oil

Tall Oil—Supply & Distribution in the U.S. In Millions of Pounds

Year Beginning Oct. 1[3]	Supply			Disposition										
						Non Food Products								
	Production	Stocks Oct. 1[4]	Total Supply	Exports	To U.S. Territ.	Soap	Paint & Varnish	Linoleum & Oil-cloth	Resins & Plastics	Other Drying Oils	Lubricants & Similar Oils	Fatty Acids	Other	Total Nonfood Products
1968	1,239	172	1,411	97	—	9	52	15	1	41	10	1,144	16	1,288
1969	1,284	184	1,468	125	—	4	41	16	—	31	10	1,154	12	1,269
1970[3]	1,271	140	1,411	145	.2	3	42	—	—	32	8	1,023	41	1,118
1971	1,299	148	1,447	165	.1	3	46	—	—	28	8	1,033	41	1,132
1972	1,326	150	1,476	173	.2	3	45	—	—	—	9	1,062	43	1,163
1973	1,235	139	1,374	219	.3	3	42	—	—	—	8	967	42	1,062
1974	1,054	93	1,147	120	.1	2	33	—	—	—	7	783	33	858
1975–6[1]	1,176	169	1,345	233	1.6	3	39	—	—	—	7	861	42	953
1976–7[1]	1,181	148	1,329	176		7								1,015
1977–8[2]	350	169	519	168										230
1978–9[2]	191	166	357	107										87
1979–0														

[1] Preliminary. [2] Estimated. [3] Data prior to 1970 are for the CALENDAR YEAR. [4] Prior to 1970 data are for JAN. 1.
Source: Agricultural Marketing Service, U.S.D.A.

Tall Oil Domestic Disappearance in the United States, Beginning of Month In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1970	106.9	83.1	94.8	100.8	101.5	89.7	76.1	101.1	96.2	100.4	93.3	81.7	1,126
1971	102.2	88.3	82.0	93.0	90.8	106.2	92.3	90.9	96.6	88.2	107.7	72.6	1,111
1972	95.8	92.8	105.4	91.9	95.6	92.8	88.7	104.4	95.8	102.4	88.9	74.0	1,129
1973	102.0	77.2	106.2	96.6	107.6	87.0	105.4	115.3	100.2	103.6	104.6	81.0	1,187
1974	98.6	77.5	90.5	86.8	92.9	81.4	90.5	84.0	70.6	83.1	82.5	84.0	1,022
1975	62.5	85.4	31.9	55.1	63.3	78.1	62.4	80.3	89.5	77.6	68.2	71.2	825
1976[1]	65.7	91.0	87.2	70.4	101.5	82.8	69.4	98.9	68.6	80.8	79.4	79.5	975
1977[1]							46.8	72.6	82.5	89.0	84.4	89.8	
1978[1]	-9.3	-13.2	19.6	-3.0	-4.9	1.9	8.1	-5.3	-2.7	4.4	1.6	17.1	
1979[1]	16.1	23.0	-19.4	10.3	19.0	29.3	-26.6	-13.0	25.5	17.1	-22.9	-7.3	
1980[1]	-18.7	2.3											

[1] Preliminary. *Source: Statistical Reporting Service, U.S.D.A.*

U.S. Average Wholesale Price of Tall Oil, Crude (Tanks-Works) In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1968	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
1969	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
1970	3.4	3.4	3.4	3.4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
1971	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
1972	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	4.1	4.3	3.8
1973	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.2
1974	4.3	4.3	4.3	5.6	6.3	6.3	7.5	7.8	9.0	11.4	11.3	11.3	7.4
1975	13.4	13.4	10.9	9.0	8.3	7.3	6.0	5.8	5.8	5.8	5.9	6.0	8.1
1976	6.1	6.3	6.3	5.8	5.8	5.8	5.5	5.5	5.5	6.0	6.0	6.0	5.9
1977	6.6	6.6	6.6	7.0	7.0	7.0	7.0	7.1	7.1	7.1	7.1	7.2	7.0
1978	7.4	7.5	7.5	7.8	7.8	7.8	7.8	7.5	7.5	7.5	7.5	7.6	7.6
1979	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8
1980	7.8	7.8	7.8	7.8	7.8	7.8	7.8						
1981													

Source: Economic Research Service, U.S.D.A.

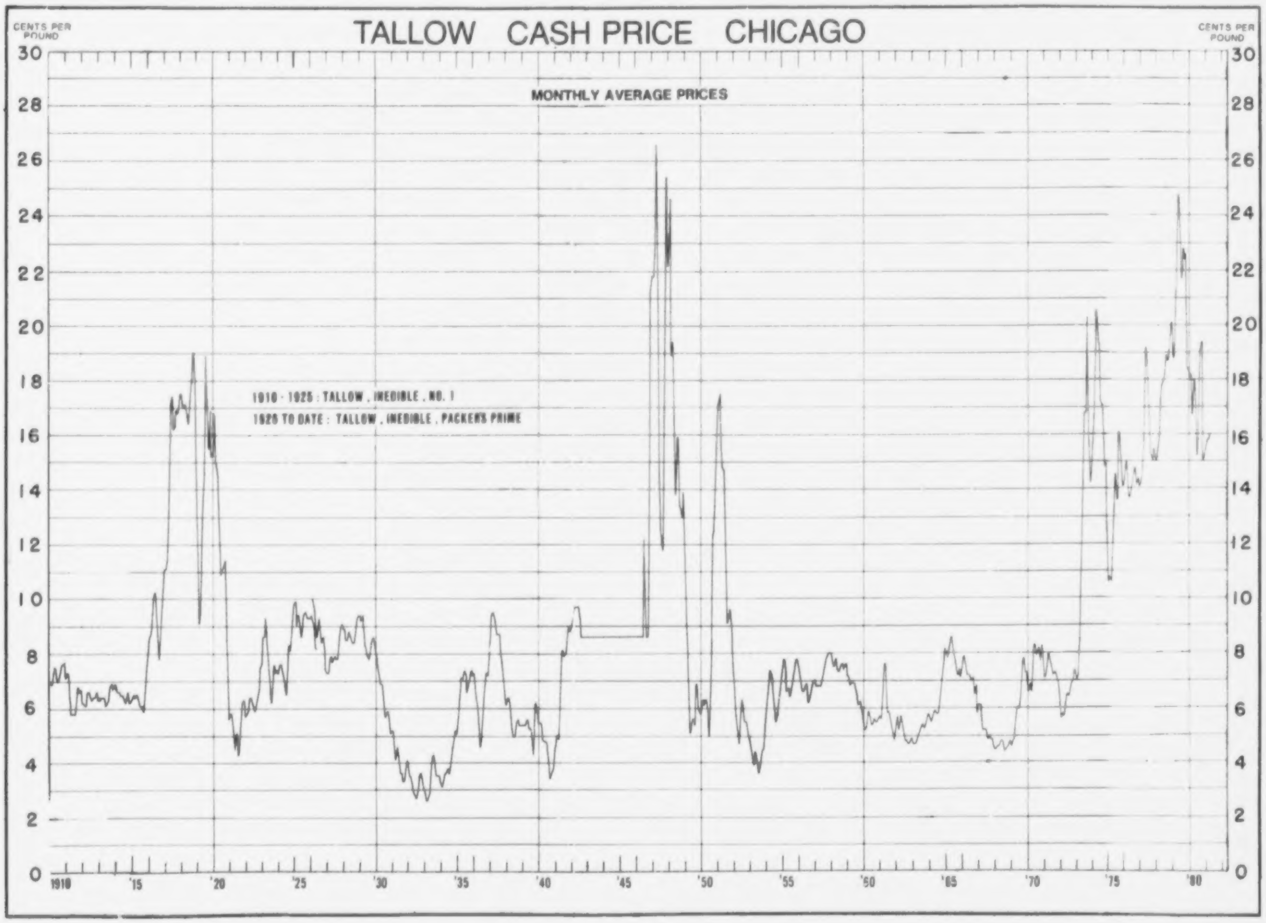
Tallow and Greases

U.S. production of edible and inedible tallow and grease in the 1980/81 season (October 1–September 30) was estimated by the USDA at 3.18 million tonnes, about the same as the previous season. Total U.S. fat production, which includes butter (fat content), lard, and tallow and grease, was estimated at 4.08 million tonnes for the 1980/81 season, versus 4.12 million for 1979/80. Projected reductions in livestock slaughter were cited as the reason for the expected slight decline.

Domestic use of tallow and grease in 1980/81 was expected to total around 4 billion pounds, basically unchanged from 1979/80 use. Exports for 1980/81 were also expected to be around their 1979/80 level. The largest export markets for U.S. inedible tallow and grease are Egypt, Japan, and Korea. In recent years, edible tallow accounted for about 15 percent of total tallow and grease production, and for a similarly small percentage of total U.S. exports of tallow and grease.

Edible tallow is mostly used in shortening manufacture. The major uses of inedible tallow are in the production of fatty acids used in soap, detergents, cosmetics, candles, waxes, and many chemical intermediates. Tallow is also used in animal feeds. The slowdown in industrial activity in 1979/80 reduced demand for fatty acids. With a possible upswing in the economy in 1980/81 and the increase in industrial activity, tallow prices could increase. Higher petrochemical feedstock prices also strengthen the demand for tallow and grease.

Edible tallow production in the U.S. is slowly continuing an upward climb. Edible tallow prices closely follow lard prices since they are both animal fats used in manufacturing shortening and margarine. Edible tallow prices declined from 23 cents per pound in October 1980 to about 21 cents in early January 1981, but prices were expected to strengthen later in the season.



TALLOW AND GREASES

World Production of Tallow and Greases (Edible and Inedible) In Thousands of Metric Tons

Year	Argentina	Australia	Brazil	Canada	Colombia	U.S.S.R.	France	W. Germany	Italy	Mexico	Netherlands	New Zealand	United Kingdom	United States	Eastern Europe	World Total
1969	153.9	188.4	75.4	150.5	20.4	305.0	122.0	116.0	66.5	20.4	28.8	95.6	137.2	2,354	93.5	4,180
1970	140.1	192.5	69.5	179.8	21.5	298.4	126.0	127.0	65.4	21.6	33.6	94.0	147.3	2,478	91.7	4,354
1971	128.9	213.3	70.5	199.6	23.8	304.7	144.0	161.0	66.3	21.2	33.2	92.1	147.3	2,609	91.7	4,579
1972	137.6	244.4	73.0	204.4	22.0	309.9	147.0	135.0	63.8	21.4	32.6	94.0	138.2	2,550	89.2	5,528
1973	135.5	247.7	75.0	204.5	19.6	316.3	157.0	135.0	66.0	22.8	33.9	99.5	132.1	2,412	100.5	5,121
1974[1]	140.7	197.8	62.5	208.7	17.6	335.8	179.0	150.0	88.0	27.3	45.2	95.1	162.6	2,912	102.2	4,723
1975[1]																5,294
1976[1]																5,471
1977[1]																5,815
1978[1]																5,866
1979[1]																5,878

[1] Preliminary. *Source: Foreign Agricultural Service, U.S.D.A.*

Salient Statistics of Tallow and Greases (Inedible) in the United States In Millions of Pounds

	Supply				Exports & Shipments	Utilization in Nonfood Products						Wholesale Prices, ¢ Per Lb.			
													Inedible		
													Chicago		
Year	Apparent Production[2]	Imports	Stocks Jan. 1	Total		Soap	Animal Feed	Fatty Acids	Lubricants & Oils	Other	Total[3]	Edible, (Loose) Chicago	No. 1	Bleachable Fancy	N.Y. Special, Tanks
1968	4,745	6	425	5,176	2,240	639	1,011	573	92	288	2,580	6.3	4.2	4.9	4.5
1969	4,655	6	358	5,019	1,896	635	1,078	608	101	173	2,775	9.3	6.0	6.8	5.8
1970	4,905	7	348	5,260	2,242	602	1,098	585	96	240	2,622	11.2	7.1	8.1	7.6
1971	5,210	5	396	5,611	2,607	588	1,143	585	81	226	2,623	10.8	6.6	7.7	7.1
1972	5,078	2	380	5,460	2,357	640	1,116	698	83	206	2,762	10.1	6.0	7.0	6.1
1973	4,843	10	341	5,194	2,299	566	1,077	899	111	270	2,540	18.4	12.4	14.9	7.2
1974	5,664	12	356	6,032	2,623	632	962	750	92	207	3,029	26.8	15.2	18.2	N.A.
1975	4,801	15	380	5,196	2,011	662	1,287	698	115	149	2,908	24.3	12.0	14.2	
1976	5,774	9	277	6,060	2,337	764	1,396	817	142	164	3,367	16.5	13.2	15.0	
1977	5,981	4	355	6,340	2,893	737	1,397	764	128	158	3,099	21.2	13.6	17.1	
1978	5,871	3	344	6,218	2,698	695	2,489				3,184	22.8	16.0	19.8	
1979[1]	5,956	3	347	6,306	2,795	663	2,454				3,117	26.2	18.8		
1980															

[1] Preliminary. [2] Apparent production based on reported factory production, net foreign trade, & change in stocks. Reported factory production excludes that from small rendering plants. [3] Includes small amounts used in drying-oil products in some years. [4] Estimate. *Sources: Economic Research Service, U.S.D.A.; Bureau of Labor Statistics*

Average Wholesale Price of Tallow, Inedible, Packers (Prime), C.A.F. Chicago In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1968	4.5	4.6	4.6	4.8	4.8	4.6	4.4	4.5	4.5	4.6	4.8	4.6	4.6
1969	4.8	4.9	5.6	6.0	6.0	6.3	6.8	7.6	7.8	7.3	7.3	6.6	6.4
1970	6.9	6.6	7.4	8.1	8.3	7.9	8.1	8.2	7.7	8.3	8.0	7.2	7.7
1971	7.1	7.6	8.0	7.8	7.6	7.4	7.2	7.3	7.2	7.0	6.7	5.6	7.2
1972	5.8	5.7	5.8	6.5	6.5	6.4	6.6	6.9	7.0	7.4	7.2	7.0	6.6
1973	7.2	8.6	10.1	11.8	14.3	16.8	16.8	20.3	15.9	14.6	14.2	15.4	13.8
1974	16.6	19.4	20.5	19.4	19.3	17.2	17.1	17.0	14.8	14.9	14.3	10.8	16.8
1975	10.6	10.8	10.6	12.2	13.6	14.6	13.6	16.1	15.9	14.9	14.5	14.1	13.5
1976	14.1	14.4	15.0	13.7	13.9	14.2	14.8	14.2	14.4	14.1	14.1	14.3	14.3
1977	14.7	14.9	15.9	17.6	19.2	17.6	16.9	15.3	15.0	15.5	15.3	15.0	16.1
1978	15.4	16.0	17.3	17.8	17.9	18.2	18.9	18.7	19.5	19.8	20.1	18.8	18.4
1979	19.8	20.8	22.9	24.8	24.1	21.7	22.8	22.4	22.6	20.9	18.4	18.2	21.6
1980	18.1	16.7	17.5	18.0	16.8	15.2	16.8	19.0	19.4	17.5	20.4	19.0	17.9

Source: Economic Research Service, U.S.D.A.

Tea

World tea production (including the Peoples Republic of China) in 1980 was estimated by the USDA's Foreign Agricultural Service (FAS) at 1.81 million tonnes, up 2.6% over 1979. India, the world's largest producer, harvested a record tea crop of about 576,000 tonnes in 1980. Gains in tea production in 1980 from 1979 were also recorded by China, Bangladesh, and Turkey while smaller crops were harvested in Kenya, the U.S.S.R. and Sri Lanka.

Drought reduced 1980 production in Kenya. Under normal growing conditions in 1981, Kenya's production could easily exceed its 1979 record of 99,300 tonnes because of new plantings coming into production. (It takes 3–4 years to bring tea into production.) World tea production should continue to expand in the 1980's but at a slower rate than in the 1970's due to decreasing availability of land for tea production. Most Asian producers, except China, have little potential to increase production and exports. Also, significant production and export gains are not expected in Latin America and Oceania in the coming years. However, African producers are expected to continue to increase tea production and exports. African producers have a competitive advantage over Asian producers because of lower production costs and taxes, and greater availability of land.

As a result of close balance between annual world supply and demand, tea prices have remained relatively stable in the past 2 years after peaking in 1977. Carryover is not a significant factor in world tea trade as tea is generally considered to have a limited shelf life of no more than 12 months before quality declines.

Prospects for Indian tea exports are clouded by the inverse relationship between sugar prices and Indian domestic consumption of tea. Thus, the lower sugar prices become, the more tea will be consumed domestically and less would be available for export.

Salient Statistics of Tea in the United States In Millions of Pounds

		U.S. Imports: (In Thous. Metric Tons[2])												Domestic Disappearance			
Year	Stocks, Jan. 1	Argentina	Sri Lanka (Ceylon)	China	India	Indonesia	Japan	Kenya[2]	Mozambique	Netherlands	Malawi	Taiwan	Total	Total Supply	Military	Civilian	Per Capita per Lb.
1968	56		49.9		23.8	20.3	4.0	10.7	3.0	17.2	4.9	6.6	155.4	211	3	143	.73
1969	64		51.8		19.3	20.6	2.9	12.3	3.0	6.3	5.8	4.7	140.0	204	2	145	.73
1970	55		46.1		15.8	21.4	2.8	15.2	2.4	6.3	5.1	5.3	137.2	192	3	146	.72
1971	42		54.8		22.8	25.4	2.6	21.4	3.9	8.7	7.4	8.0	175.4	217	2	158	.77
1972	56		42.9		16.8	21.7	3.9	14.6	4.6	7.6	6.9	8.2	151.5	207	3	160	.77
1973[3]	43	1.1	19.7	.6	8.2	13.3	2.1	8.4	3.1	5.1	2.7	3.2	78.9	216	2	165	.79
1974		1.8	19.6	1.2	7.5	13.3	1.9	7.9	3.1	6.4	3.2	3.3	80.9				.80
1975		1.8	18.3	2.0	6.8	12.9	1.7	8.4	2.7	2.4	2.2	4.0	72.3				.80
1976		2.1	21.1	3.0	8.0	11.6	3.2	10.7	2.0	1.3	4.1	4.8	82.2				.81
1977		4.9	16.6	4.2	12.3	14.7	3.4	9.5	2.3	3.0	5.6	5.7	92.1				.90
1978		6.7	14.0	2.9	1.7	10.7	3.2	8.2	1.4	4.1	4.2	3.0	68.8				.70
1979[1]		7.0	14.7	6.5	5.9	11.2	2.9	9.4	2.4	4.7	2.5	2.3	79.2				.70
1980																	

[1] Preliminary. [2] Imports prior to 1973 are in MILLIONS OF POUNDS. *Sources: Statistical Reporting Service, U.S.D.A.; Bureau of Census*

N.Y. Wholesale Price of Tea (Black)[1] In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1968	46.6	47.1	45.3	45.7	46.0	45.6	46.1	46.2	46.4	46.8	45.6	44.7	46.0
1969	43.9	44.0	43.6	42.9	42.3	42.4	41.0	42.0	41.9	41.2	42.1	43.4	42.6
1970	43.9	44.2	44.6	44.8	45.3	45.4	45.8	47.1	47.8	47.5	45.9	47.7	45.8
1971	48.1	47.8	48.8	48.1	48.3	47.7	48.1	48.1	49.7	49.5	49.6	50.7	48.7
1972	50.3	50.8	53.0	53.5	53.5	52.1	51.0	49.1	49.6	49.5	47.8	47.6	50.7
1973	46.8	47.9	48.6	48.8	48.9	48.2	48.7	48.8	48.0	48.0	48.0	48.3	48.3
1974	49.1	50.4	58.2	62.7	62.3	64.7	63.8	64.9	64.4	65.3	66.9	71.4	62.0
1975	71.3	73.9	75.5	72.1	69.4	68.7	65.3	65.0	63.6	65.4	65.9	66.4	68.5
1976	66.1	66.7	67.3	67.1	68.2	71.4	75.9	82.4	81.7	81.3	80.3	82.5	74.2
1977	N.A.	99.9	136.8	211.4	191.6	157.9	144.2	136.0	129.4	116.1	116.8	112.1	141.1
1978	109.9	122.1	121.5	115.1	110.4	109.4	109.6	108.8	107.4	110.3	110.5	106.6	111.8
1979	108.9	107.0	105.3	102.1	99.9	96.4	97.5	97.8	102.0	105.9	103.3	101.8	102.3
1980	103.9	108.9	110.3	110.0	109.3	106.3	106.6	107.1	107.8	N.A.	104.6	103.6	107.1
1981	103.3	107.3											

[1] Medium broken grade from Ceylon & India; ex-dock or ex-warehouse. *Source: Bureau of Labor Statistics* (0191–0331)

TEA

World Tea Production, in Major Producing Countries In Thousands of Metric Tons

Year	Argentina	China	Sri-Lanka (Ceylon)	India	Indonesia	Iran	Japan	Kenya	Malawi	Mozambique	Bangladesh	Taiwan	Turkey	Uganda	USSR	World Total
1968	17.0	N.A.	224.8	402.5	41.4	18.7	85.0	29.8	15.8	14.2	28.3	24.4	27.6	15.2	56.1	1,035
1969	20.0	N.A.	219.6	396.0	44.1	19.0	89.6	36.1	16.9	16.0	30.0	26.2	34.4	17.6	59.9	1,062
1970	18.5	N.A.	212.2	418.5	44.0	16.0	91.2	41.1	18.7	17.0	31.4	27.6	33.4	18.2	66.8	1,098
1971	25.0	N.A.	217.8	435.5	48.2	24.0	92.9	36.3	18.6	16.5	12.5	27.0	33.6	18.0	68.6	1,123
1972	24.0	N.A.	213.5	456.0	49.8	22.0	94.8	53.3	20.7	18.7	23.8	26.2	46.5	23.4	71.3	1,197
1973	23.1	N.A.	211.3	472.0	54.5	23.0	101.0	56.6	23.6	18.8	27.6	28.6	43.2	20.4	74.8	1,236
1974	26.0	N.A.	204.0	492.1	51.7	25.0	95.2	53.4	23.3	17.6	32.2	24.2	42.8	21.7	80.8	1,245
1975	29.0	N.A.	213.7	487.1	56.8	23.0	105.4	56.7	26.2	13.1	29.0	26.1	55.6	18.4	86.3	1,284
1976	33.0	N.A.	196.6	511.8	61.1	22.0	100.1	62.0	28.3	13.8	33.3	24.8	59.5	15.4	92.0	1,316
1977	33.5	252.0	208.6	556.3	64.3	20.0	102.3	86.3	31.7	14.0	37.5	26.3	84.1	15.2	106.4	1,474
1978	30.0	268.0	199.0	571.3	73.2	25.0	104.7	93.4	31.7	18.1	38.0	25.9	86.2	10.9	111.2	1,518
1979[1]	33.0	277.0	206.4	549.6	73.3	20.0	100.0	93.3	32.6	19.7	35.9	27.1	100.0	1.5	115.0	1,520
1980[2]	35.0	285.0	200.0	580.0	75.0	20.0	104.0	90.0	32.5	20.0	42.0	27.5	110.0	4.0	110.0	1,569
1981																

[1] Preliminary. [2] Forecast. *Source: Foreign Agricultural Service; U.S.D.A.*

World Tea Exports from Producing Countries In Thousands of Metric Tons

Year	Sri Lanka (Ceylon)	China	India	Indonesia	Japan	Malaysia	Bangladesh	Taiwan	Total Asia	Kenya	Mozambique	Malawi	Total Africa	Argentina	Grand Total
1968	208.7	34.8	208.4	34.7	2.0	1.9	—	18.4	518.5	28.4	14.2	15.8	83.5	14.7	619.7
1969	201.4	32.4	168.7	27.1	1.6	1.5	—	21.3	463.4	33.8	15.4	17.3	98.8	14.6	579.8
1970	208.3	30.0	200.2	36.9	1.6	1.3	—	20.4	509.4	36.1	16.7	17.7	103.5	19.1	636.3
1971	200.8	41.0	204.4	40.2	1.5	1.0	—	22.8	531.7	34.3	17.5	18.2	105.6	22.4	665.5
1972	190.1	42.0	209.8	38.5	1.9	.8	13.2	21.3	535.8	47.4	18.4	19.9	129.3	18.9	688.7
1973	205.5	50.2	188.2	35.6	2.2	.6	20.3	21.1	547.0	51.5	17.9	22.1	137.4	18.0	709.0
1974	185.1	63.6	205.9	50.2	1.8	.6	21.2	17.2	563.6	49.6	17.2	23.8	134.3	24.1	728.3
1975	212.4	61.3	219.4	46.0	2.2	.5	24.1	20.1	592.3	52.6	12.2	24.2	132.6	17.4	747.5
1976	199.7	61.2	237.3	47.5	3.2	.5	30.7	21.1	608.7	59.3	12.9	29.6	142.2	25.1	782.7
1977	185.5	81.8	229.6	51.3	3.5	.5	26.0	20.8	611.1	70.2	12.9	29.9	158.6	26.9	803.1
1978	192.6	86.9	176.1	56.2	3.4	.5	30.9	20.4	577.4	85.0	16.7	30.8	178.3	31.0	795.7
1979[1]	187.5	106.8	199.8	53.6	3.1	.5	20.4	19.4	604.1	94.0	18.2	31.1	180.4	28.8	821.8
1980															

[1] Preliminary. *Source: Foreign Agricultural Service, U.S.D.A.*

United States Imports of Tea In Thousands of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1968	10,910	10,121	13,500	13,121	15,800	13,734	11,440	16,354	14,766	7,677	12,279	15,633	155,335
1969	1,859	4,046	14,825	16,785	17,989	13,655	11,644	8,892	13,760	11,141	13,593	11,773	139,962
1970	10,826	10,264	15,285	12,767	11,503	10,972	8,940	8,778	10,805	11,971	10,409	12,682	135,202
1971	13,226	12,360	15,073	18,078	15,128	16,529	20,150	25,141	19,427	4,631	3,828	11,862	175,432
1972	12,914	16,907	10,276	10,165	12,885	16,563	10,835	11,581	12,830	14,348	11,460	10,731	151,495
1973	15,481	14,295	15,399	14,107	17,423	12,425	13,660	12,614	12,527	16,878	16,506	11,997	173,314
1974	11,675	14,974	16,583	17,177	18,122	17,489	21,788	16,432	13,954	10,460	7,735	11,844	178,326
1975	14,297	12,200	15,486	13,648	14,694	12,170	9,915	11,276	12,404	17,594	13,940	11,843	159,287
1976	11,842	12,309	15,779	15,805	13,053	13,893	14,259	15,051	19,224	15,683	16,133	18,273	181,304
1977	16,059	15,064	22,389	23,302	27,345	22,335	22,252	15,932	9,994	9,702	7,213	10,924	203,012
1978	9,023	12,791	18,648	15,450	17,523	8,286	13,141	13,788	9,390	12,502	8,877	12,332	151,751
1979	14,797	10,568	15,584	13,822	13,556	14,352	13,361	14,809	15,841	16,992	15,432	15,578	174,690
1980	18,749	17,562	17,456	18,501	15,871	16,460	14,099	11,883	11,870	14,271	12,126	15,936	184,786
1981	12,891												

Source: Department of Commerce

Tin

The United States continued to rely upon foreign sources for tin in 1980, with the estimated net import reliance representing 84 percent of apparent domestic consumption. The major foreign suppliers were Malaysia, Thailand, Bolivia, and Indonesia. Imports of tin metal decreased slightly in 1980. About 20 percent of the tin used in the U.S. was reclaimed from scrap. U.S. mine production of tin was below 200 tonnes in 1980, and secondary production declined.

Domestic primary tin consumption of about 46,000 tonnes and secondary tin consumption of about 11,000 tonnes were slightly less than 1979 levels, according to the Bureau of Mines. The major uses for tin were in tinplate—35 percent; solder—24 percent; and bronze and brass—12 percent.

Tin prices rose in 1980 despite a slight worldwide excess of supply relative to demand as lower economic activity dampened demand for tin. The *Metals Week* average annual New York market price increased about $1 per pound in 1980 to about $8.50 per pound. However, influenced in part by U.S. stockpile disposals, prices dropped sharply in early 1981. The average Penang tin price slumped to a 33-month low of 1,728 ringgit per picul equivalent by early May 1981, compared with its average price of 2,160 ringgit a picul in 1980.

In January 1980, the Strategic and Critical Materials Transaction Authorization Act of 1979 was enacted, authorizing the disposal of materials determined to be excess to the current needs of the National Defense Stockpile. The Act provided for the sale of up to 35,000 long tons of tin, including a contribution of up to 5,000 long tons to the International Tin Council (ITC) buffer stock. Starting in July GSA conducted biweekly stockpile tin auctions of up to 500 metric tons each time, with a maximum offering of 10,000 metric tons per year. The General Services Administration (GSA) held its last biweekly auction on November 18, 1980 and switched to a daily fixed-price program for selling Government stockpile tin on December 1. Total sales for 1980 and 1981 through February amounted to about 65 tonnes of tin. At the end of 1980, the U.S. Government strategic stockpile of tin amounted to 203,690 tonnes, versus a revised stockpile goal of 42,674 tonnes.

Negotiations were conducted for the Sixth International Tin Agreement, due to take effect July 1981. Talks were deadlocked on several key areas of conflict between producer and consumer countries, especially the size of the ITC buffer stock and export controls. During 1980 the ITC revised upwards its floor and ceiling prices 10 percent to $5.61 and $7.30 per pound, respectively. Tin pact talks were still deadlocked in the spring of 1981, primarily because of disagreement between producing and consuming members of the International Tin Council (ITC) concerning the buffer stock price range.

United States Tin Stocks (Pig—Industrial) In Metric[2] Tons[1]

Year	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1969	18.6	15.0	13.8	15.5	15.6	14.9	15.3	14.7	13.6	16.0	16.2	14.8
1970[1]	13,824	13,655	13,135	12,680	11,765	11,810	12,865	11,330	10,700	11,705	11,965	11,690
1971	11,318	10,000	8,970	8,155	8,495	9,510	10,600	10,340	11,205	10,905	9,025	8,520
1972	9,804	12,005	12,670	11,247	10,630	12,535	11,240	11,235	12,195	10,080	11,370	12,180
1973[2]	11,757	10,435	9,023	9,764	9,419	8,286	9,175	9,038	10,795	9,300	9,002	9,495
1974	10,124	9,078	8,829	9,978	10,069	10,331	9,983	9,307	10,669	9,800	9,998	10,369
1975	10,420	11,873	13,117	10,333	10,986	11,240	11,049	9,164	9,133	9,249	9,883	8,840
1976	9,642	9,395	8,624	9,189	7,855	6,963	8,375	9,623	8,749	7,871	7,929	7,213
1977	7,282	8,032	7,883	5,874	6,175	5,644	4,720	6,305.	5,557	5,378	9,214	7,212
1978	8,441	7,626	6,628	6,291	7,785	8,139	7,846	7,817	7,260	5,774	4,975	5,666
1979	5,040	4,594	4,254	5,891	6,097	5,938	6,317	6,270	6,096	5,058	4,901	4,244
1980	4,238	7,720	6,682	7,527	5,443	7,263	6,592	6,544	6,051	5,180	5,208	5,086

[1] Data prior to 1970 are in THOUSANDS OF LONG TONS. [2] Data prior to 1973 are in LONG TONS. *Source: Bureau of Mines*

United States Tin (Pig) Consumption (Total) In Metric[1] Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1969	6,920	6,330	6,755	7,250	7,130	6,905	6,435	6,455	6,625	7,105	6,110	6,210	80,790
1970	6,345	5,605	6,760	6,595	6,505	6,580	5,885	5,635	6,240	5,860	5,515	5,690	73,837
1971	5,830	5,660	6,355	6,305	6,175	6,240	5,605	5,185	5,870	5,910	5,800	5,610	69,950
1972	5,370	5,470	6,190	5,750	6,150	5,985	5,260	5,660	5,405	5,700	5,365	5,525	69,201
1973[1]	5,964	6,040	6,472	6,411	6,569	6,330	5,294	5,720	5,913	6,355	6,045	5,878	75,838
1974	6,757	5,995	6,259	6,533	6,386	6,061	4,689	5,431	5,614	6,147	4,166	4,283	65,781
1975	3,871	4,847	4,841	5,055	4,394	4,308	3,810	4,298	4,521	4,755	4,410	4,618	55,800
1976	5,170	4,930	5,825	5,415	5,490	5,965	5,240	5,380	5,680	6,395	5,950	5,700	62,828
1977	5,600	5,500	6,800	5,800	5,800	6,000	5,200	5,800	5,900	5,400	5,000	5,100	68,000
1978	5,400	5,000	5,500	5,200	5,700	5,400	4,600	5,200	5,200	5,300	5,400	4,900	63,100
1979	5,400	5,500	6,400	5,400	5,400	5,300	4,900	4,900	5,000	5,500	5,000	4,600	62,500
1980	5,500	5,300	5,750	5,300	4,600	4,100	3,700	3,900	4,150	4,300	4,050		

[1] Data prior to 1973 are in LONG TONS. *Source: Bureau of Mines*

World Mine Production of Tin (Content of Ore) In Thousands of Metric[4] Tons

Year	Australia	Bolivia[1]	Brazil	U.S.S.R.	China[3]	Zaire (Congo)	Indonesia	Japan	Malaysia	Nigeria	Rwanda	South Africa	Thailand	United Kingdom	World Total
1968	6.5	29.1	2.8	.4	20.0	6.2	16.7	.9	75.1	9.6	1.4	1.8	23.6	1.8	228.3
1969	8.6	29.6	2.6	.4	20.0	6.5	17.1	.7	72.2	8.6	1.3	1.8	20.8	1.6	225.7
1970	8.7	28.9	3.6	27.0	20.0	6.4	18.8	.8	72.6	7.8	1.3	2.0	21.4	1.7	228.5
1971	9.9	29.5	2.1	28.0	20.0	6.4	19.4	.8	74.3	7.2	1.3	2.0	21.3	1.8	231.4
1972	11.8	31.0	3.7	28.5	20.0	5.9	21.0	.9	75.6	6.6	1.3	2.1	21.7	3.3	240.3
1973[4]	10.8	30.3	5.4	29.0	20.0	5.4	22.3	.8	72.3	5.8	1.3	2.7	20.9	3.8	237.8
1974	10.5	29.5	4.4	29.5	20.0	4.7	25.0	.5	68.1	5.5	1.3	2.5	20.3	3.8	232.9
1975	9.6	24.3	5.0	30.0	22.0	4.6	25.3	.7	64.4	4.7	1.4	2.6	16.4	4.1	222.3
1976	10.6	30.3	5.4	31.0	20.0	3.8	24.5	.6	63.4	3.7	1.6	2.8	20.5	3.3	228.4
1977	10.6	32.6	6.5	33.0	20.0	5.1	25.9	.6	58.7	3.3	1.6	2.9	24.2	4.1	235.9
1978	11.9	30.9	7.0	34.0	22.0	4.4	27.4	.6	62.7	2.8	1.5	2.9	31.4	3.1	251.2
1979[2]	11.4	27.6	8.0	35.0	25.0	4.5	26.0	.6	64.0	3.0	1.5	2.7	35.4	2.8	256.0
1980[3]	12.0	27.0	9.0	34.0	22.0	4.0	26.0		64.0	2.0			36.0	2.3	250.0
1981															

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[1] Exports. [2] Preliminary. [3] Estimate. [4] Data prior to 1973 are in LONG TONS. *Source: Bureau of Mines*

World Smelter Production of Tin In Thousands of Metric[3] Tons

Year	United States[1]	Australia	Belgium	Brazil	Zaire (Congo)	Malaysia	China	W. Germany	Japan	Nigeria	Indonesia	Portugal	U.S.S.R.	Un. Kingdom	Total
1968	3.5	3.7	4.8	1.7	1.9	88.2	20.0	1.5	1.9		3.6	.6	26.0	24.9	229.6
1969	.3	4.2	4.4	2.2	1.9	87.1	20.0	1.4	1.4		5.9	.5	27.0	26.0	225.3
1970	N.A.	5.1	4.2	3.2	1.4	90.0	20.0	1.2	1.4	7.9	5.1	.4	27.0	21.7	223.7
1971	4.0	6.2	3.9	3.4	1.3	85.7	20.0	1.2	1.3	7.2	9.1	.5	28.0	22.8	232.0
1972	4.2	6.9	3.9	3.5	1.4	89.6	20.0	.8	1.3	6.6	11.8	.6	28.5	21.0	236.3
1973[3]	4.9	6.9	3.7	3.8	1.0	82.5	20.0	1.0	1.4	6.0	14.6	.5	29.0	20.4	233.9
1974	6.1	6.7	3.4	4.9	1.0	83.1	20.0	1.4	1.3	5.6	15.1	.5	29.5	20.4	236.2
1975	6.5	5.3	4.6	5.4	.6	83.1	22.0	1.3	1.2	4.7	17.8	.4	30.0	11.5	227.9
1976	5.7	5.6	4.1	6.3	.5	78.0	20.0	1.4	1.1	3.7	23.3	.3	31.0	11.2	233.6
1977	6.7	5.6	3.5	7.4	.8	66.3	20.0	2.9	1.3	3.3	24.0	.6	33.0	10.5	232.4
1978	5.9	5.1	3.3	7.2	.5	72.0	22.0	3.2	1.1	3.0	25.8	.5	34.0	8.4	247.0
1979[2]	4.6	5.0	3.0	8.0	.5	72.0	25.0	3.0	1.3	3.0	28.0	.6	35.0	8.0	259.2
1980															

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[1] Imports into the U.S. of tin concentrates (tin content). [2] Preliminary. [3] Data prior to 1973 are in LONG TONS.
Source: Bureau of Mines

Tin Foreign Trade of the United States In Metric[5] Tons

		Imports (For Consumption)													
		Concentrates[3] (Ore)			Bars, Blocks, Pigs, etc.[4] (Metal)										
Year	Exports (Metal[2])	Total All Ore	Bolivia	Indonesia	Total All Metal	Thailand	Belgium	Indonesia	Malaysia	Netherlands	United Kingdom	Bolivia	Brazil	China (Mainland)	Nigeria
1968	4,495	2,439	2,337	—	57,358	12,326	12	—	41,324	871	1,430	38	—	—	606
1969	2,903	0	—	—	54,950	13,946	31	—	37,945	267	1,873	—	—	—	170
1970	4,452	4,467	4,467	—	50,554	15,395	11	—	31,819	70	412	—	—	—	481
1971	2,262	3,060	3,010	—	46,940	13,861	16	—	27,746	25	621	864	—	—	306
1972	1,134	4,216	4,216	—	52,451	11,727	71	1,997	32,645	163	471	1,104	—	—	184
1973	3,406	4,798	4,782	—	45,845	7,964	118	2,829	28,255	45	888	832	—	—	105
1974	8,415	5,877	5,877	—	39,602	5,766	10	4,121	20,668	194	1,834	1,135	—	—	521
1975[5]	3,596	6,415	6,415	—	44,366	7,305	—	4,302	23,542	—	444	147	—	—	58
1976	2,338	5,733	5,733	—	45,055	6,885	—	4,972	26,981	—	284	1,978	—	—	—
1977	5,480	6,724	6,667	55	47,774	7,780	—	5,294	27,084	1	513	3,358	2,380	381	2
1978	4,692	3,873	3,541	165	46,776	6,865	155	5,664	23,928	50	468	5,768	1,810	1,571	—
1979[1]	3,417	4,529	3,745	—	48,355	10,440	100	5,429	23,448	—	550	5,387	933	185	—
1980[6]	4,800	1,000			47,500										
1981															

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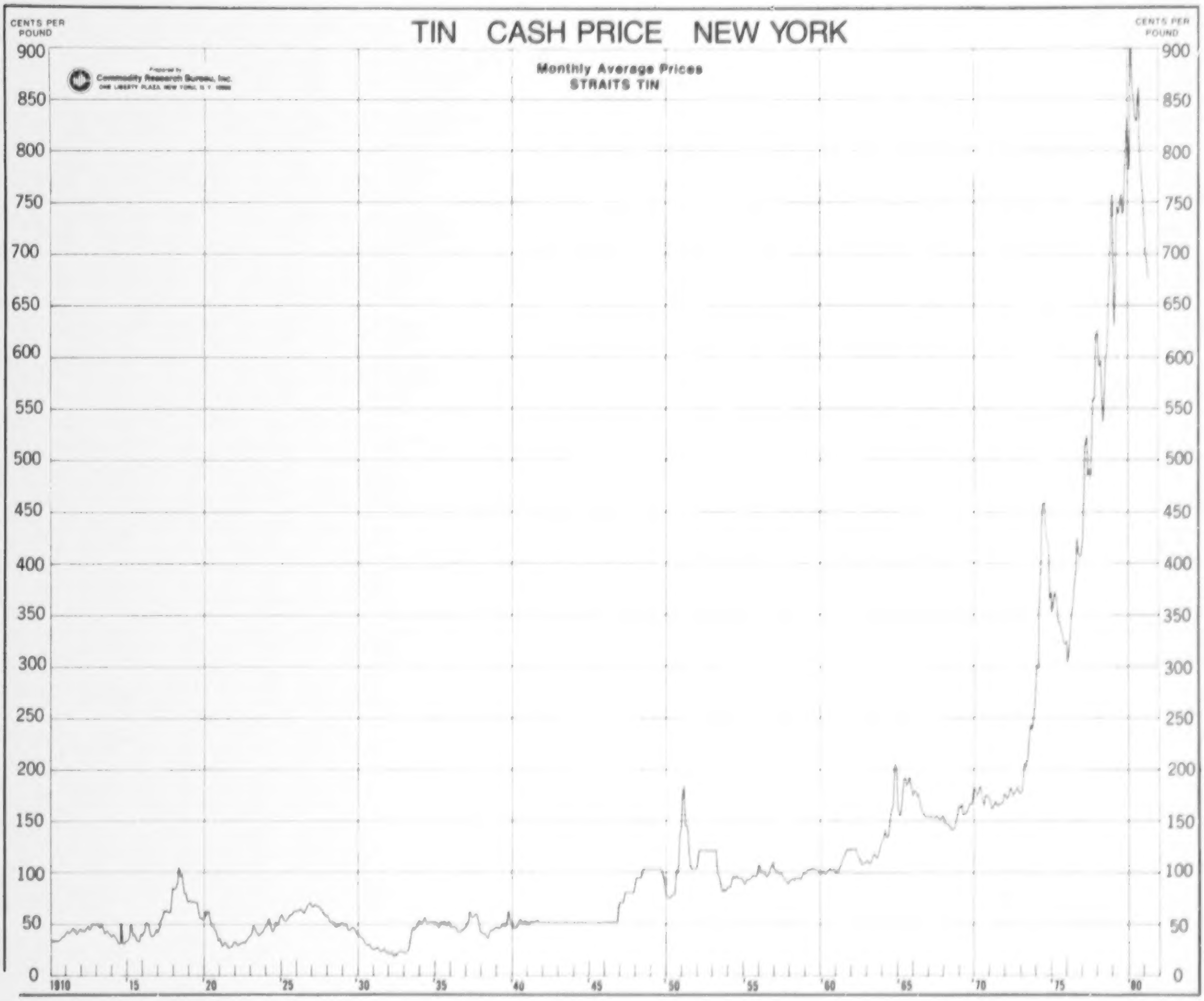
[1] Preliminary. [2] Pigs, bars, etc.; includes re-exports. [3] Tin content. [4] Also grain, or granulated. [5] Data prior to 1975 are in LONG TONS. [6] Estimate. *Source: Department of Commerce*



Average Price of Straits Tin (Alloyer Price[1]) in New York In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1968	147.87	145.63	145.62	145.21	143.29	141.65	141.48	141.84	148.04	151.07	162.14	163.46	148.11
1969	162.50	165.18	155.52	156.81	156.67	159.00	162.00	165.91	165.64	166.71	175.96	181.32	164.43
1970	179.17	174.91	177.12	183.87	180.54	170.23	164.77	174.51	174.74	173.65	172.25	163.85	174.13
1971	161.64	162.85	167.01	168.88	166.02	164.48	166.44	166.07	167.29	167.70	175.39	174.36	167.34
1972	171.31	172.00	179.81	181.98	177.92	175.03	176.61	179.12	181.99	180.40	177.21	176.25	177.47
1973	179.05	192.00	205.09	202.44	209.11	212.27	237.55	243.45	239.50	245.91	262.44	300.99	227.48
1974	298.14	351.54	389.43	440.77	456.88	458.50	426.61	422.99	415.92	365.33	370.96	351.87	395.75
1975	363.76	372.03	366.04	354.10	342.54	342.48	333.32	331.85	322.77	321.95	324.03	303.02	339.83
1976[1]	312.39	326.00	349.07	358.80	377.00	390.30	424.27	411.27	405.40	406.77	414.84	423.25	383.34
1977	470.54	514.16	522.97	485.28	491.93	482.15	518.71	559.51	558.47	619.25	626.16	613.36	538.76
1978	591.19	595.93	557.48	537.85	570.58	600.95	606.21	641.80	679.66	739.69	758.84	695.86	631.34
1979	684.56	724.57	746.14	740.06	745.18	760.14	712.31	739.93	762.03	785.54	801.23	830.88	756.87
1980	781.73	866.39	900.23	872.21	861.84	845.19	836.95	834.61	861.92	832.92	788.67	751.36	840.73
1981	739.94	705.76	691.70	677.38									
1982													

[1] **Prices prior to 1976 are for PROMPT DELIVERY.** *Source: American Metal Market*

U.S. Consumption of Primary and Secondary Tin In Metric[3] Tons

Year	Net Import Reliance as a % of Apparent Consumption	Industry Stocks Jan. 1	Net Receipts				Available Supply	Industry Stocks Dec. 31	Total Processed	Consumed in Mfg. Pdt's.
			Primary	Secondary	Scrap	Total				
1969		28,152	55,125	2,325	21,624	79,074	107,226	23,441	83,785	80,790
1970		23,441	52,096	2,502	19,748	74,346	97,787	21,505	76,622	73,837
1971[3]		21,505	52,557	2,531	16,439	71,527	93,032	18,855	74,177	71,073
1972		18,855	55,958	2,842	14,115	72,915	91,770	18,787	72,983	70,312
1973		18,787	60,125	4,089	13,915	78,129	96,916	18,534	78,382	75,838
1974		18,534	55,382	2,285	12,296	69,963	88,497	21,051	62,269	65,780
1975	84	21,051	42,430	2,699	10,568	55,697	76,748	19,510	57,238	55,800
1976	85	19,510	49,995	2,019	10,189	62,203	81,713	16,894	64,819	62,928
1977	82	16,894	48,215	4,025	10,604	62,844	79,738	16,858	62,880	60,732
1978[1]	79	16,858	46,821	2,541	10,499	58,861	76,719	13,584	63,135	61,531
1979[2]	80	13,584	44,914	2,636	7,430	54,980	68,564	4,497	64,067	62,465
1980[2]	84	4,497						4,940		
1981[2]		4,940								

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[1] Preliminary. [2] Estimated. [3] Data prior to 1971 are in LONG TONS. *Source: Bureau of Mines*

Consumption of Tin in the United States by Finished Products In Metric[5] Tons of Contained Tin

Year	Tin-plate[2]	Solder	Babbitt	Bronze & Brass	Collap. Tubes & Foil	Tinning	Chemicals[3]	Tin Powder	Type Metal	Bar Tin & Anodes	White Metal	Total	
												Primary	Secondary
1969	26,886	21,283	3,506	16,526	1,143	2,289	3,107	1,274	1,110	1,043	1,384	57,730	23,060
1970	25,127	20,184	3,241	13,666	860	2,143	3,125	1,059	1,109	1,052	1,274	52,957	20,880
1971	23,669	19,759	3,164	11,023	733	2,294	3,640	1,533	820	842	1,447	51,980	17,970
1972	21,070	21,961	3,135	9,722	806	2,540	4,030	1,150	840	896	1,717	53,501	15,700
1973	21,267	24,727	3,475	9,976	1,002	2,585	4,828	1,459	640	705	2,103	58,142	16,498
1974[5]	22,686	15,586	3,306	9,508	968	2,563	4,942	1,331	344	812	2,005	52,439	13,341
1975	18,869	15,075	2,605	7,555	538	1,896	3,998	850	265	637	2,217	43,620	12,180
1976	20,766	17,728	2,423	7,656	694	2,308	5,621	1,208	216	758	2,347	51,767	11,161
1977	18,539	17,315	2,093	8,606	787	2,323	5,727	1,287	202	578	1,655	47,596	13,136
1978	17,280	17,770	2,346	9,048	673	2,431	4,557	1,360	171	424	1,484	48,403	13,128
1979[1]	17,929	18,022	2,243	8,690	686	2,584	4,797	1,435	140	567	1,258	49,496	12,969
1980[4]	17,000	13,000	1,300	6,500	450	1,800	4,600	1,200	90	500	1,000	46,000	11,000

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[1] Preliminary. [2] Includes small quantity of secondary pig tin and tin acquired in chemicals. [3] Including tin oxide. [4] Estimated. [5] Data prior to 1974 are in LONG TONS. *Source: Bureau of Mines*

Secondary Tin Recovered in the United States In Metric[4] Tons

Year	Tin Recovered at Detinning Plants						Tin Recovered by Form of Recovery								
	Tin-plate Scrap Treated (Ths. Tons)	Tin Recovered			Weight of Tin Compounds Produced	Avg. Quantity of Tin Recov. Per Ton of Tin-Scrap (Kilog.[5])	Tin Metal	Bronze & Brass	Solder	Type Metal	Babbitt	Anti-Monial Lead	Chemical Compounds	Misc.[3]	Grand Total
		As Metal	In Compounds[2]	Total											
1969	831.7	2,420	560	2,980	990	8.03	3,022	11,659	4,645	1,497	817	510	584	41	22,775
1970	771.4	1,988	620	2,608	1,076	7.57	2,574	9,277	4,898	1,517	683	351	700	1	20,001
1971	742.3	1,786	583	2,369	1,105	7.15	2,324	8,934	5,482	1,202	899	631	612	12	20,096
1972	715.0	1,494	672	2,166	1,284	6.79	2,199	9,354	5,213	1,232	854	604	716	8	20,180
1973	764.2	1,416	677	2,093	1,450	6.13	2,012	9,487	5,488	1,052	751	948	727	12	20,477
1974[4]	717.8	1,449	585	2,034	1,085	2.83	2,021	8,963	5,319	987	570	729	599	12	19,200
1975	651.2	1,146	670	1,816	1,344	2.79	1,741	7,144	4,414	877	569	442	670	12	15,869
1976	685.5	1,195	424	1,619	1,348	2.36	1,467	8,319	4,513	668	495	548	424	12	16,446
1977	667.4	1,376	365	1,741	1,516	2.61	1,668	10,397	4,094	708	694	565	365	12	18,503
1978	714.9	1,324	463	1,787	1,803	2.50	1,565	12,419	4,363	1,038	521	712	463	19	21,100
1979[1]	841.4	1,536	433	1,969	1,256	2.34	1,767	12,090	5,282	584	441	867	433	29	21,493
1980[6]							1,800	10,000	3,500	400	350	700			17,500

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[1] Preliminary. [2] Tin content. [3] Includes foil, cable lead & terne metal. [4] Data prior to 1974 are in LONG TONS. [5] Data prior to 1974 are in POUNDS. [6] Estimate. *Source: Bureau of Mines*

Titanium

The market for titanium sponge metal continued to be very strong in 1980, and demand for titanium dioxide pigment was about the same as in 1979, according to the Bureau of Mines.

Mine production of ilmenite decreased 14 percent in 1980 to about 550,000 tons. Imports of ilmenite, more than 90% from Australia, were estimated at 320,000 tons, 74 percent higher than in 1979. Imports of slag, 82 percent from Canada and the rest from the Republic of South Africa, totaled about 180,000 tons, 62 percent more than in 1979. Natural rutile imports, 74 percent from Australia, 13 percent from South Africa, and 13 percent from Sierra Leone, were about 161,000 tons. Synthetic rutile imports totaled about 74,000 tons, 37 percent less than those of 1979, and were 71 percent from Australia, 18 percent from India, and 11 percent from Japan.

The spot price of rutile rose to \$425–\$450 per short ton f.o.b. Atlantic and Great Lakes ports; the price f.o.b. Australia at yearend was \$308–\$350 per short ton for bulk quantities and \$371–\$425 per short ton for smaller lots. Ilmenite was quoted at \$55 per long ton f.o.b. Atlantic ports. Slag, 70–72 percent TiO_2, rose to \$115 per long ton f.o.b. Sorel, Quebec, while slag, 85 percent TiO_2, was priced at \$137 per long ton f.o.b. Richards Bay, Republic of South Africa.

Production and consumption of titanium dioxide pigment in 1980 were estimated at 727,000 and 757,000 tons, respectively.

Pigment imports were about 106,000 tons, slightly higher than in 1979. Pigment exports were about 49,000 tons, near the 1979 level.

The U.S. strategic stockpile goal for titanium sponge was increased from 131,503 tons to 195,000 tons, because of increased requirements and domestic capacity limitations, while the goal for rutile was reduced from 173,928 tons to 106,000 tons, because of a decline in requirements for nonmetal applications. Late 1980 stockpile inventories were 32,331 tons of sponge metal and 39,186 tons of rutile.

Shipments of titanium mill products in 1980 were 23 percent higher than in 1979. The shortage of titanium sponge which prevailed in 1979 and early 1980 was eased as production capacities were increased 13 percent in the U.S. and 53 percent in Japan. Further increases in capacity were planned for 1981.

Production of titanium sponge metal was 12 percent higher than in 1979. Industry sponge inventories decreased from 2,200 tons in January to about 2,000

World Production of Titanium Sponge Metal & U.S. Consumption of Titanium Concentrates In Short Tons

	Production of Titanium Sponge Metal[1]				U.S. Consumption of Titanium Concentrates, by Products										
					Ilmenite (TiO_2 Content)					Rutile (TiO_2 Content)					
Year	Central Economy Countries	Other Mkt. Econ. Count.	Japan	United States	Pigments (Mfg. TiO_2)	Welding-Rod Coatings	Alloys & Carbide	Misc.	Total	Ceramics	Welding-Rod Coatings	Alloys & Carbine	Pigments	Misc.	Total
1972		2,500	5,133	13,000	453,248	N.A.	N.A.	8,174	519,353	N.A.	20,409	659	108,544	23,988	153.600
1968		—	5,983	14,000	509,013	N.A.	1,133	207	541,840	451	20,987	—	124,718	31,934	178,090
1969		—	7,100	16,000	540,403	208	1,119	30	519,766	377	14,917	75	135,350	29,644	181,402
1970		—	10,174	15,500	515,860	356	1,320	13	486,271	390	13,107	N.A.	181,535	21,274	215,916
1971		2,500	7,470	12,000	479,316	474	1,104	6,955	461,422	N.A.	10,392	N.A.	199,894	21,945	232,231
1973		2,500	7,173	17,000	470,087	N.A.	N.A.	9,144	479,231	N.A.	10,059	N.A.	221,658	31,648	263,365
1974		2,500	9,825	20,000	492,206	N.A.	N.A.	9,070	501,276	N.A.	11,181	N.A.	228,507	38,032	277,720
1975		2,500	8,358	18,000	424,302	—	—	8,107	432,409	—	9,782	—	181,128	28,013	218,923
1976		2,100	6,995	14,000	490,845	—	—	7,168	498,013	—	7,736	—	194,950	20,926	223,612
1977	39,000	2,400	7,049	N.A.	514,429	—	—	6,765	521,194	—	8,184	—	136,191	29,465	173,840
1978[3]	39,000	2,400	10,115	N.A.	467,410	N.A.	N.A.	8,038	475,448	—	8,427	N.A.	195,431	41,326	245,184
1979[2]	43,000	2,600	14,000	N.A.	475,342	N.A.	N.A.	11,886	478,228	—	9,947	N.A.	230,776	52,189	292,912
1980[2]	45,000	2,600	20,000	N.A.											

[1] Unconsolidated metal in various forms. [2] Estimated. [3] Preliminary. *Source: Bureau of Mines*

Average Prices in the United States

Year	Titanium Ilmenite—54% TiO_2 F.O.B. Atlantic Seaboard—\$ per Long Ton	Titanium Rutile F.O.B. Atlantic & Great Lakes Ports, Last Quarter (Spot) \$ per Short Ton	Titanium Metal Sponge, Yearend \$ per Pound	Titanium Dioxide Pigments (\$ per Lb.) Anatase	Titanium Dioxide Rutile, Yearend \$ per Pound
1972	23	175	1.32		
1973	27	310	1.42		
1974	47	710	2.25		
1975	55	710	2.70	0.385	0.435
1976	55	510	2.70	0.410	0.465
1977	55	360	2.98	0.435	0.485
1978	50	340	3.28	0.460	0.510
1979	50	390	3.98	0.530	0.590
1980[1]	55	440	7.02	0.570	0.630

[1] Preliminary. *Source: U.S. Bureau of Mines*

tons by yearend. Ingot production increased 10 percent during 1980. Consumption of sponge and scrap increased 13 percent and 6 percent, respectively. Imports of sponge increased from 2,500 tons in 1979 to 4,500 tons in 1980, with 80 percent from Japan, 15 percent from Mainland China, and 5 percent from U.S.S.R. The published price of domestic sponge metal was increased in July 1980 from $3.98 to $7.02 per pound, and imported Japanese sponge rose in April 1980 from $3.60 per pound to $7.50–$8.70 per pound, where it remained for the rest of the year.

World Production of Titanium Rutile Concentrates In Short Tons

Year	South Africa	Australia	USSR	Egypt	Brazil	Sierra Leone	India	Sri Lanka (Ceylon)	United States	World Total
1968	—	322,131	—	—	126	6,304	2,961	1,270	N.A.	332,792
1969	543	399,100	—	—	10	31,379	2,751	3,036	N.A.	436,819
1970	—	405,156	—	—	258	48,593	2,400	3,100	N.A.	459,507
1971	—	404,233	—	—	129	13,153	3,210	3,100	N.A.	423,825
1972	—	345,176	—	—	454	—	3,379	2,371	N.A.	351,380
1973	—	358,914	—	—	46	—	3,748	2,482	9,255	374,445
1974	—	351,308	30,000	—	161	—	6,400	3,450	6,446	397,765
1975	—	383,990	30,000	—	115	—	4,000	3,427	11,000	421,532
1976	—	429,625	10,000	—	56	—	4,000	1,145	N.A.	444,826
1977	5,000	358,561	10,000	—	141	—	6,053	1,078	N.A.	380,833
1978	20,000	283,376	10,000		402	—	5,500	12,673	N.A.	331,951
1979[1]	46,000	305,773	10,000		400	11,000	10,000	15,000	N.A.	398,173
1980[2]	48,000	325,000				55,000	12,000			472,000

[1] Preliminary. [2] Estimate. *Source: Bureau of Mines*

World Production of Titanium Ilmenite Concentrates[2] In Thousands of Short Tons

Year	Australia (Shipments)	Canada[3]	Sri Lanka (Ceylon)	Finland	India	Japan[3]	Malaysia (Exports)	Norway	Brazil	USSR	Spain	South Africa	United States[4]	World Total[2]
1968	619.5	672.9	82.2	153.8	64.7	4.6	138.7	443.4	19.7	—	43.6	—	978.5	3,222
1969	794.2	749.2	91.3	152.3	56.7	10.1[5]	146.2	540.9	22.4	—	32.2	18.2	931.2	3,546
1970	988.8	844.7	93.2	166.4	86.0	12.2[5]	212.1	638.2	22.8	—	29.9	—	868.0	3,963
1971	914.1	853.0	102.4	153.8	72.8	8.7[5]	171.9	707.2	10.9	—	26.0	—	683.1	3,705
1972	791.6	920.4	90.9	164.8	100.4	6.0[5]	170.1	670.7	4.2	—	24.8	—	681.7	3,626
1973	792.7	942.7	103.0	175.3	85.1	7.1[5]	204.3	829.9	4.6	—	4.1	—	776.0	3.925
1974	916.6	931.2	93.9	167.6	146.0	4.9	169.2	934.9	7.4	338.0	—	—	744.6	3,519
1975	1,111	826.6	70.6	135.1	90.0	4.9	123.7	580.5	5.1	360.0	—	—	717.3	4,026
1976	1,070	897.4	61.5	135.1	100.0	3.8	198.4	845.1	16.1	420.0	—	—	652.4	4,391
1977	1,151	763.2	37.6	137.5	151.4	1.4	169.4	913.3	14.6	440.6	—	—	638.5	4,418
1978	1,401	937.0	36.4	145.4	165.0	.2	205.9	845.5	22.1	450.0	100.0	100	598.8	4,899
1979[1]	1,281	525.8	39.0	145.0	165.0	.2	206.0	903.6	20.0	450.0	330.0	330	639.3	4,705
1980[6]	1,370	960			170.0			900.0				420	550.0	5,230

[1] Preliminary. [2] Includes Ti slag containing approx. 70% TiO_2. [3] Represents titanium slag. [4] Includes a mixed product containing ilmenite, leucoxene, & rutile. [5] Includes slag & concentrate. [6] Estimate. *Source: Bureau of Mines*

Salient Statistics of Titanium[4] in the United States In Short Tons

	Ilmenite				Titanium Slag			Rutile		Exports of Titanium Products			
Year	Production (Gross Wt.)	Shipments (TiO_2)	Imports[3]	Stocks Dec. 31 (TiO_2)	Consumption (TiO_2)	Imports[3]	Stocks (TiO_2)	Imports[3]	Stocks Dec. 31 (TiO_2)	Ores & Concentrates	Scrap	Dioxide & Pigments	Primary Forms
1968	978,509	506,260	178,154	504,087	100,591	N.A.	84,743	174,366	209,842	4,238	2,756	30,188	1,228
1969	931,247	480,918	28,524	475,960	98,075	82,329	73,308	204,898	187,183	1,424	2,802	24,507	1,773
1970	867,955	487,298	96,123	458,046	91,639	134,996	81,761	243,259	227,689	1,058	2,902	26,194	1,740
1971	683,075	388,802	28,093	383,113	101,751	152,661	76,741	227,784	225,925	1,760	1,711	26,759	430
1972	677,944	417,553	14,836	314,584	187,608	298,259	100,746	220,533	150,801	1,802	3,510	10,335	562
1973	776,013	458,541	69,691	329,477	199,287	237,248	78,650	226,860	139,641	1,494	4,142	20,769	745
1974	744,571	434,605	82,448	325,918	182,257	236,272	40,836	246,489	101,394	3,264	4,730	30,379	1,719
1975	717,281	404,269	122,010	378,181	104,585	212,682	62,130	224,499	131,742	3,147	4,326	15,807	1,900
1976	652,404	374,989	168,402	429,801	144,506	171,624	70,242	281,712	143,243	4,802	6,144	20,580	1,065
1977	638,503	331,139	334,990	494,658	106,201	150,564	44,464	123,800	136,935	22,679	3,394	16,336	1,050
1978	589,751	352,842	308,671	510,430	91,490	149,172	75,097	289,617	172,685	N.A.	5,453	39,341	1,340
1979[1]	639,292	389,535	184,478	462,217	106,346	111,210	56,917	283,479	120,070	9,903	4,967	51,456	1,984
1980[2]	550,000		400,000			200,000		235,000		25,000	3,600	50,000	3,300

[1] Preliminary. [2] Estimate. [3] For consumption. [4] Natural & synthetic. *Source: Bureau of Mines*

Tobacco

The 1980 U.S. tobacco crop totaled 1.78 billion pounds, compared with 1.53 billion in the previous year. U.S. production represented 15 percent of world production, up from 13 percent in 1979. A further recovery of yields and acreage at the 1980 level could increase the 1981 U.S. tobacco crop to about 6 percent above 1980 production. A larger crop would offset smaller beginning stocks and keep the 1981/82 tobacco supply about the same as in 1980/81.

Despite a larger 1980 crop, smaller carryin stocks pulled 1980/81 domestic leaf supply down to 5.04 billion pounds, 2 percent below 1979/80. However, by October 1, 1981 all tobacco carryover stocks were expected to again be at a relatively low level.

Domestic Use

Cigarettes: Cigarette output in 1980, a record 714 billion cigarettes, increased 1 percent above 1979. Both domestic use and tax-exempt categories gained. Also, consumption of smokeless tobacco products (chewing tobacco and snuff) gained again in 1980. Use of both smoking tobacco and cigars fell below a year earlier; another drop was expected in 1981.

U.S. smokers consumed 630 billion cigarettes in 1980, 1½ percent above 1979. Consumption per adult at 196 packs was about the same as in 1979. Total cigarette use may remain steady in 1981, as increasing population offsets reduced per capita use.

Cigar use: Large cigar use (including cigarillos) continued to fall in the fourth quarter of 1980. U.S. smokers used about 4 billion large cigars in 1980, 7 percent fewer than a year earlier. Production of small cigars—less than 3 pounds per 1,000—declined to 1.42 billion pieces, off 8 percent from 1979, and continued the downward trend that started in 1973.

Smokeless use: In 1980, the combined consumption of chewing tobacco and snuff rose to the highest level since 1950. Manufacturers sell virtually all their chewing tobacco and snuff domestically.

Foreign Trade

The United States is the world's leading tobacco exporter and the largest importer. U.S. exports of tobacco and products were valued at a record $2.43 billion in calendar year 1980. U.S. tobacco imports totaled $487 million, leaving a record trade balance of $1.9 billion.

U.S. exports of unmanufactured tobacco in 1980 rose 6 percent from 1979 to 599 million pounds (272 thousand tonnes) in export (dried) weight. The farm-sales weight reached 721 million pounds, 57 million above the 1979 figure.

Exports of flue-cured, burley, Maryland, and fire-cured gained, other categories fell short of 1979. Except for burley, exports remained below the highs reached in 1978.

European markets, which typically take six-tenths of U.S. leaf tobacco exports, increased U.S. imports by 13 percent in 1980. The larger U.S. crop meant greater choice and thereby contributed to the EEC recovery. Asian countries took smaller amounts.

By 1980, several countries had experienced a slowdown in the growth of cigarette sales; the growth of low-tar cigarettes spurred interest in non-U.S. tobaccos. High interest rates further limited manufacturers' ability to carry stocks. Hence, 1981 export prospects were expected to barely maintain their 1980 level.

West Germany replaced Japan as the leading destination for U.S. tobacco in 1980. However, West Germany's takings could fall in 1981 because a portion of extra takings went for inventory building. Japan's shift may be permanent because of changes in cigarette blends. United Kingdom, long a major U.S. market, fell to fourth place behind the Netherlands.

Exports of flue-cured tobacco gained 6 percent, but again made up about three-fourths of total U.S. tobacco shipments. Larger purchases from other areas, including European destinations, offset the smaller amounts that Asian countries took.

Burley exports gained 11 percent. Larger purchases by European destinations more than offset smaller Asian takings. Maryland and fire-cured tobacco exports both recovered from the previous year's low.

Imports for consumption of unmanufactured tobacco and the customs NSPF category 170.80 (tobacco manufactured or not manufactured not specifically provided for) increased 4 percent last year to 394 million pounds. This quantity represents withdrawals from bond and duty-paid releases for manufacture immediately upon arrival. The U.S. imported more cigarette leaf and stems, as well as larger quantities of scrap, both for cigarettes and cigars.

U.S. Government Programs

The United States International Trade Commission (ITC) began public hearings May 11, 1981 on whether certain tobaccos are imported under such conditions that render ineffective or materially interfere with the USDA tobacco program.

The 1981 price support program for tobacco was similar to that of previous years. Price support is available to eligible growers through nonrecourse loans to producer associations. To receive price supports, tobacco producers must certify that they did not use DDT, TDE, toxaphene, or endrin insecticides. As a condition for price support for flue-cured tobacco, USDA requires growers to designate a warehouse where they intend to sell their tobacco. The USDA was expected to continue to enforce the acreage allotments for flue-cured tobacco and will retain the four-leaf program, which permits participating producers to exceed their allotments.

Support prices for the 1981 crop are up 12.1 percent over 1980. The national average loan level for the 1981 crop of flue-cured tobacco (Types 11–14) is 158.7 cents per pound vs. 141.5 in 1980. For 1981 crop burley tobacco, the national average loan rate is 163.6 cents per pound vs. 145.9 in 1980.

Growers of cigar binder and Ohio filler tobaccos approved marketing quotas so price supports will be available for their 1981, 1982, and 1983 crops. Growers of flue-cured, burley, fire-cured, dark air-cured, and sun-cured tobaccos approved marketing quotas applicable to the 1981 crop in previous referenda. However, growers of Maryland and Pennsylvania filler tobacco will have no price supports because they turned down marketing quotas last year.

TOBACCO

World Production of Leaf Tobacco In Thousands of Metric Tons[5] (Farm Sales–Weight[3])

Year	United States	Brazil	Canada	China	U.S.S.R.	France	Greece	India	Indonesia	Italy	Japan	Pakistan[4]	Philippines	Turkey	World Total[1]
1968	1,721	335	219		575	117	194	813	242	159	426	373	185	356	9,833
1969	1,810	415	247		516	100	170	796	287	173	383	364	201	317	9,821
1970	1,911	432	222	1,700	569	106	200	743	240	173	332	360	218	330	10,021
1971	1,712	432	225	1,781	604	96	184	798	173	166	328	336	155	383	9,865
1972	1,754	421	187	1,852	516	109	188	924	165	176	318	192	107	401	10,155
1973	1,744	399	257	2,103	672	112	202	821	287	207	347	139	168	334	10,670
1974[5]	906.1	225.5	116.5	983.8	313.0	51.7	81.1	462.1	78.3	92.7	151.3	64.6	88.4	203.5	5,185
1975	994.0	285.6	106.1	959.8	298.0	56.3	118.2	394.8	82.2	113.4	165.7	78.0	66.3	208.6	5,369
1976	944.8	253.0	89.6	980.0	290.0	56.6	126.6	380.0	80.0	108.6	165.2	71.0	89.0	260.2	5,435
1977	869.1	310.0	104.3	987.0	307.0	43.6	118.9	418.8	83.7	109.7	173.2	72.6	84.3	248.0	5,519
1978	919.7	330.0	115.6	975.0	282.0	50.5	130.2	493.6	82.5	109.7	172.0	76.3	79.2	292.6	5,630
1979[2]	693.5	401.0	78.9	965.0	301.0	50.6	128.6	451.2	84.4	136.3	153.3	69.9	85.3	214.3	5,411
1980[1]	808.6	338.0	113.3	797.0	285.0	49.3	113.4	400.0	82.1	125.0	148.1	75.3	75.5	266.0	5,203
1981															

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[1] Estimated. [2] Preliminary. [3] Farm–Sales–weight is about 10% above dry weight which is normally reported in trade statistics. [4] Bangladesh (Formerly East Pakistan) excluded from 1972 to date. [5] Data prior to 1974 are in MILLIONS OF POUNDS. *Source: Foreign Agricultural Service, U.S.D.A.*

Production and Consumption of Tobacco Products in the United States

Year	Production									Consumption[3] Per Capita[4]					
	Chewing Tobacco														
	Plug	Twist	Fine-cut	Loose-leaf	Total	Cigarettes	Cigars[2]	Smoking Tobacco	Snuff	Cigars[2]	Cigarettes	Cigars[2]	Cigarettes	Smoking Tobacco	Total Pdt.'s
	Million Pounds					Billion		Million Lbs.		Number		Pounds			
1968	22.9	2.6	4.3	35.7	65.4	579.5	7.18	66.3	27.1	126.5	4,186	2.15	8.69	1.11	10.59
1969	23.3	2.5	4.5	39.5	69.8	557.6	6.93	63.9	27.6	125.0	3,993	2.11	8.11	1.08	10.04
1970	22.0	2.4	4.8	39.5	68.7	583.2	7.09	69.4	26.5	125.3	3,985	2.08	7.77	1.15	9.68
1971	20.6	2.4	5.1	43.2	71.4	576.4	6.71	60.5	26.4	119.2	4,037	1.94	7.75	1.06	9.52
1972	19.6	2.2	5.2	45.6	72.6	599.1	6.03	55.9	25.5	108.9	4,043	1.74	7.95	1.00	9.65
1973	18.6	2.2	5.7	47.6	74.0	644.2	5.66	53.0	25.3	102.4	4,148	1.61	7.92	.88	9.53
1974	18.0	2.2	6.2	52.9	79.2	635.0	5.28	49.0	25.0	91.9	4,141	1.47	7.90	.87	9.40
1975	18.1	2.3	7.3	53.7	81.5	651.2	4.52	46.2	24.4	82.4	4,123	1.32	7.73	.76	9.14
1976	16.7	2.3	8.4	56.3	83.7	693.4	4.18	44.6	24.8	75.0	4,092	1.20	7.35	.75	8.69
1977	16.4	2.2	10.1	61.3	90.0	665.9	3.93	40.7	24.6	67.9	4,051	1.15	7.21	.65	8.49
1978	15.9	2.1	12.0	64.6	94.6	695.9	3.80	36.4	25.1	63.4	3,967	1.15	6.89	.60	8.10
1979	15.3	2.0	13.3	71.7	102.3	704.4	3.60	32.8	23.7	59.0	3,924	1.07	7.13	.52	8.30
1980[1]	17.3	1.9	14.7	72.1	106.0	714.2	3.45	32.2	25.5	52.2	3,924	.86	7.06	.49	8.17
1981															

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[1] Preliminary. [2] Large cigars & cigarillos. [3] Consumption of tax-paid tobacco products; Represents unstemmed equivalent of tobacco used in the manufacture of these products. [4] 18 years old & over.
Sources: Bureau of the Census; Internal Revenue Service

Production of Tobacco in the United States In Millions of Pounds

Year	Conn.	Florida	Georgia	Indiana	Kentucky	Maryland	Massachusetts	North Car.	Ohio	Pa.	South Car.	Tenn.	Virginia	Wisconsin	W. Virg.
1968	9.5	26.5	107.7	13.3	413.9	32.0	3.5	667.4	18.8	37.3	122.4	121.7	112.7	14.0	
1969	7.3	26.0	97.9	14.8	436.8	28.0	3.2	716.0	21.9	37.5	136.7	120.8	134.6	13.2	3.6
1970	8.7	28.9	133.3	14.6	411.9	29.4	3.6	815.5	20.8	30.1	141.1	114.3	125.8	18.4	3.3
1971	7.6	25.6	115.1	12.1	356.3	28.1	2.9	727.1	17.5	24.5	133.2	105.6	118.4	22.5	2.0
1972	5.6	23.5	115.2	15.5	446.7	23.8	1.9	680.4	22.5	18.2	131.1	124.7	112.1	18.7	3.3
1973	6.8	24.0	97.9	10.6	320.9	31.5	2.0	811.9	15.9	22.1	132.7	101.3	138.1	19.0	2.8
1974	7.9	27.8	161.4	16.7	452.0	30.2	2.4	789.2	23.1	26.0	172.0	110.9	141.6	18.5	2.9
1975	6.4	29.6	151.0	17.0	456.7	21.9	2.0	957.0	23.7	19.8	189.0	134.6	142.1	20.8	3.1
1976	7.2	30.8	123.8	18.2	497.4	29.9	1.8	902.9	23.3	23.6	153.4	139.7	153.9	20.2	3.2
1977	5.6	24.8	134.9	16.6	452.0	30.1	1.9	744.5	22.7	26.2	138.7	136.7	143.0	24.4	3.2
1978	5.0	22.1	125.7	15.5	469.7	30.6	1.5	849.7	22.5	25.2	150.5	142.1	135.2	20.3	2.7
1979	4.9	23.2	101.0	11.9	343.1	22.0	1.5	621.4	14.1	17.7	117.7	104.8	109.6	25.1	1.7
1980[1]	5.5	20.3	110.6	15.3	409.2	22.6	2.1	763.7	20.5	22.8	125.1	112.5	108.9	24.3	2.7
1981															

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[1] Preliminary, December estimate. *Source: Crop Reporting Board, U.S.D.A.*

U.S. Salient Statistics for Flue-Cured Tobacco (Types 11–14)

Crop Year	Acres Harvested 1,000	Yield Per Acre 100 Lbs.	Production	Stocks, July 1	Total Supply	Exports	Dom. Disappearance	Total Disappearance	Farm Price ¢ Lb.	Crop Value Mil. $	Parity Price[2]	Price Support Level	Placed Under Gov't Loan	Under Loan July 1
			Millions of Pounds								¢ Lb.		Mil. Lb.	
1968	533.0	18.4	996	2,302	3,297	525	672	1,197	66.6	663	86.7	61.6	128.8	773.4
1969	576.8	18.3	1,053	2,100	3,153	535	646	1,181	72.4	762	92.6	63.8	97.6	800.5
1970	584.1	20.4	1,178	1,972	3,151	534	640	1,174	72.0	848	96.3	66.6	144.2	744.9
1971	525.8	20.5	1,076	1,976	3,053	480	663	1,143	77.2	832	101.0	69.4	55.7	761.9
1972	513.6	19.7	1,022	1,910	2,932	519	664	1,183	85.3	864	106.0	72.7	24.3	617.8
1973	575.1	20.1	1,159	1,749	2,908	598	703	1,301	88.1	1,019	123.0	76.6	30.7	402.3
1974	617.3	20.1	1,245	1,607	2,852	548	652	1,201	105.0	1,307	136.0	83.3	23.0	276.7
1975	717.2	19.7	1,415	1,652	3,067	523	671	1,193	99.8	1,442	150.0	93.2	259.0	179.9
1976–7	666.6	19.7	1,316	1,898	3,214	514	634	1,148	110.4	1,453	155.0	106.0	277.3	359.2
1977–8	589.3	19.2	1,124	2,075	3,199	539	608	1,147	117.6	1,329	162.0	113.8	195.6	556.9
1978–9	602.1	20.5	1,206	2,052	3,258	599	584	1,183	135.0	1,663	176.0	121.0	64.1	534.0
1979–0	502.8	18.8	974	2,075	3,049	520	563	1,083	140.0	1,365	203.0	129.3	72.0	564.0
1980–1[1]	551.8	19.7	1,086	1,965	3,052	500	550	1,050	144.7			141.5	138.3	554.4
1981–2														

[1] Preliminary. [2] As of applicable date when support level was computed. [3] Farmers' intentions as of March 1.
Source: Agricultural Marketing Service, U.S.D.A.

U.S. Salient Statistics for Burley Tobacco (Type 31)

Crop Year	Acres Harvested 1,000	Yield Per Acre 100 Lbs.	Production	Stocks, Oct. 1	Total Supply	Exports	Dom. Disappearance	Total Disappearance	Farm Price ¢ Lb.	Crop Value Mil. $	Parity Price[2]	Support Level	Placed Under Gov't. Loan	Under Loan on Oct. 1
			Millions of Pounds								¢ Lb.		Mil. Lb.	
1968	237.6	23.7	563	1,324	1,888	55	516	571	73.7	415	91.1	63.5	56.2	321.7
1969	237.7	24.9	591	1,317	1,908	58	507	565	69.6	411	96.5	65.8	158.2	340.8
1970	216.4	25.9	561	1,343	1,903	54	503	557	72.2	405	101.0	68.6	47.7	454.8
1971	213.5	22.1	473	1,346	1,818	55	515	570	80.9	382	104.5	71.5	.2	468.4
1972	235.6	25.5	590	1,249	1,839	75	535	610	79.2	476	111.0	74.9	22.9	327.6
1973	222.1	20.3	461	1,229	1,691	87	533	619	92.9	418	129.0	78.9	.7	276.7
1974	260.7	23.5	610	1,071	1,681	68	519	587	113.7	694	147.0	85.8	2.8	139.2
1975	282.2	22.7	638	1,094	1,733	92	510	603	105.6	674	158.0	96.1	50.7	12.0
1976–7	285.8	23.8	664	1,160	1,824	117	501	617	114.2	775	160.0	109.3	46.6	44.8
1977–8	268.6	23.0	613	1,206	1,830	117	493	610	120.0	741	166.0	117.3	57.0	54.9
1978–9	261.4	24.0	618	1,218	1,836	121	503	624	131.2	822	184.0	124.7	67.7	113.5
1979–0	238.1	18.7	446	1,212	1,658	133	499	632	145.2	700	208.0	133.3	7.3	155.4
1980–1[1]	277.1	20.0	555	1,026	1,581	135	495	630	165.9			145.9	.0	66.3
1981–2														

[1] Preliminary. [2] As of applicable date when support level was computed. [3] Farmers' intentions as of March 1.
Source: Agricultural Marketing Service, U.S.D.A.

Exports[1] of Tobacco from the United States In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1968	44.3	44.8	28.8	36.9	43.7	45.6	43.7	63.9	73.4	38.8	71.3	63.6	598.9
1969	8.1	4.2	42.4	39.6	66.5	55.5	43.5	43.1	61.7	62.3	74.7	77.3	579.1
1970	20.5	28.2	41.1	38.3	39.9	42.3	34.7	29.6	46.8	53.7	72.8	62.5	510.3
1971	39.3	32.3	52.4	44.5	47.4	39.8	35.4	41.8	76.8	3.5	2.4	59.6	474.2
1972	95.4	87.0	28.6	17.9	42.7	33.3	39.2	40.5	48.3	54.1	63.1	56.2	606.2
1973	43.1	45.3	45.6	43.6	46.2	45.3	40.1	40.6	54.6	70.2	81.9	56.6	613.0
1974	53.5	47.6	39.1	52.7	57.7	62.8	45.2	47.6	40.0	64.1	73.0	68.3	651.4
1975	57.1	33.5	52.5	46.7	44.2	32.1	23.2	39.5	44.9	52.7	73.9	62.9	563.0
1976	93.2	52.0	47.1	43.5	29.7	26.0	23.9	34.7	48.2	52.9	51.3	75.6	578.0
1977	76.8	53.0	54.7	31.3	38.0	41.5	49.6	47.5	66.3	17.9	49.5	102.4	628.6
1978	52.5	55.6	73.2	40.9	32.3	29.2	42.7	52.3	41.3	85.8	95.8	86.3	687.8
1979	35.6	50.1	57.1	51.8	42.2	25.3	38.0	29.5	30.1	41.6	78.9	81.5	561.8
1980	28.0	52.5	80.1	54.6	53.2	43.0	40.9	25.8	32.3	47.6	64.4	66.6	589.0
1981	44.8												

[1] Represents unmanufactured tobacco, including stems, trimmings and scrap. *Source: Department of Commerce*

TOBACCO

Salient Statistics of Tobacco in the United States

Year	Acres Harvested 1,000 Acres	Yield Per Acre Lbs.	Production Million Lbs.	Farm Price ¢ Lb.	Farm Value Mil. $	Tobacco (July–June)		U.S. Exports of				Stocks of Leaf Tobacco[4] All Types			
						Exports[2]	Imports[3]	Cigarettes	Cigars & Cheroots	Chewing Tobacco & Snuff	Smoking Tobacco	Jan. 1	April 1	July 1	Oct. 1
						Mil. Lbs.		Millions		Metric Tons[6]		Billion Pounds			
1968	879	1,945	1,710	69.5	1,189	516.0	210.7	26,461	66	210	23,355	5,486	5,312	4,858	4,938
1969	918	1,964	1,803	71.8	1,296	571.0	210.1	24.969	65	33	21,246	5,179	5,005	4,590	4,771
1970	898	2,122	1,906	72.9	1,389	554.7	223.9	29,163	54	64	25,022	4,940	4,822	4,439	4,650
1971	838	2,035	1,705	78.6	1,340	524.2	259.1	31,812	53	39	32,086	5,006	4,763	4,371	4,474
1972	842	2,076	1,749	83.0	1,451	569.1	250.3	34,602	75	42	30,425	4,828	4,531	4,186	4,405
1973	887	1,965	1,742	90.1	1,569	657.4	294.2	41,543	107	93	27,084	4,700	4,459	4.039	4,196
1974	963	2,067	1,990	108.6	2,160	604.0	322.4	46,901	86	121	39,848	4,409	4,215	3,762	4,123
1975	1,087	2,008	2,182	102.6	2,238	588.2	313.3	49,935	92	32	8,703	4,457	4,310	3,946	4,282
1976	1,047	2,041	2,137	112.5	2,404	581.8	293.7	61,370	124	34	6,680	4,738	4,568	4,166	4,608
1977	966	1,982	1,914	118.6	2,269	617.0	335.7	66,845	107	43	4,844	4,978	4,797	4,431	4,710
1978	964	2,101	2,025	132.4	2,679	671.9	359.7	74,359	166	47	1,578	5,008	4,781	4,451	4,728
1979[1]	827	1,845	1,527	140.6	2,176	617.4	398.1	79,717	177	43	10,634	5,071	4,914	4,518	4,740
1980[1]	916	1,936	1,772					82,000	200			4,883	4,616	4,284	4,548
1981[1]	939[5]														

[1] Preliminary. [2] Domestic. [3] For consumption. [4] Owned by dealer & mfgrs., converted to a farm-sales weight equivalent. [5] Farmers' intentions to plant, MARCH 1. [6] Data prior to 1975 are in THOUSANDS OF POUNDS. *Source: Department of Agriculture*

Tobacco Production in the U.S., by Types In Million Pounds (Farm–Sales Weight)

Types	11–14	31	32	21	22–23	35–36	37	41	42–44	72	51–52	54–55	61–62
1968	982	563	31.9	5.9	32.6	18.0	1.2	37.3	3.4	.2	2.8	14.0	18.1
1969	1,053	591	28.1	6.7	34.1	18.2	1.3	36.5	2.8	.1	2.3	13.2	15.9
1970	1,193	561	29.4	6.2	30.9	15.4	1.1	30.6	2.9	.2	2.9	18.4	14.9
1971	1,078	473	28.1	5.9	37.6	15.7	1.1	24.5	3.8	.2	2.8	22.5	12.4
1972	1,012	601	23.8	4.7	37.5	15.5	.8	18.2	4.2	.1	2.5	18.7	9.7
1973	1,157	450	31.5	5.7	27.7	12.4	.9	22.1	3.1	.2	2.7	19.0	9.8
1974	1,241	613	30.2	5.9	26.0	11.6	.9	26.0	3.1	.1	2.5	18.5	11.0
1975	1,415	639	21.9	4.9	32.6	14.0	.7	19.8	3.0	.1	2.4	20.8	7.7
1976	1,316	679	29.9	5.3	33.2	15.1	.8	23.6	2.8	.1	2.4	20.2	7.2
1977	1,130	617	30.1	7.2	45.2	20.4	.8	26.2	3.6	.1	2.5	24.4	5.3
1978	1,232	626	30.6	6.8	51.4	22.2	.9	25.2	3.0	.1	2.6	20.3	3.8
1979	946	446	22.0	5.4	39.6	16.1	.6	17.7	2.0	.1	2.4	25.1	4.0
1980[1]	1,086	555	22.6	4.0	32.0	14.9	.4	22.8	2.4	.1	2.6	24.3	4.9
1981													

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

U.S. Exports of Unmanufactured Tobacco to Principal Importing Countries
In Millions of Pounds (Declared Weight)

Year	Australia	Belg.-Luxem.	Denmark	France	W. Germany	Thailand	Ireland	Japan	Netherlands	Norway	Italy	Sweden	Switzerland	United Kingdom	Total U.S. Exports
1968	19.7	20.1	19.2	6.9	88.6	28.9	15.0	48.8	44.0	9.7	5.0	16.9	24.8	146.7	598.8
1969	20.2	17.4	19.1	8.6	102.2	24.3	10.5	40.9	33.6	7.2	19.5	13.9	26.4	134.2	577.5
1970	10.2	12.4	18.1	9.0	92.6	20.1	10.2	58.6	26.6	8.1	3.1	19.5	24.7	95.5	510.4
1971	10.9	15.6	16.7	10.1	100.0	18.9	9.0	18.6	28.1	4.3	16.4	14.7	18.2	89.8	473.3
1972	14.8	12.9	20.8	7.7	99.3	30.5	14.3	87.3	22.4	7.0	23.1	20.5	23.5	115.1	606.1
1973	13.9	16.7	37.0	6.6	99.9	8.6	8.9	79.0	31.6	5.7	21.8	17.1	31.4	119.7	612.5
1974	18.7	14.4	12.6	8.2	97.1	20.6	10.2	109.6	31.0	5.4	24.3	14.5	21.3	94.3	651.4
1975	15.5	8.1	16.4	9.5	91.0	18.7	8.2	81.5	29.9	5.6	31.5	15.3	25.9	78.5	563.0
1976	10.3	7.5	9.0	8.3	73.7	21.8	7.7	132.7	24.7	5.5	33.2	14.1	24.4	71.8	578.1
1977	14.2	10.4	16.9	6.3	78.9	16.0	5.4	135.4	30.5	6.0	40.6	11.8	28.8	46.8	628.6
1978	12.4	16.9	27.1	9.8	53.2	18.2	5.3	102.3	34.2	4.2	41.0	17.5	26.2	148.8	700.0
1979	12.4	5.4	16.4	11.5	67.7	18.8	6.9	95.9	29.3	5.7	34.8	13.7	19.3	68.2	567.4
1980[1]	13.1	7.9	17.5	4.5	100.7	22.6	3.6	82.1	44.9	6.8	30.7	15.4	20.1	32.5	598.7
1981															

[1] Preliminary. *Source: Bureau of the Census*

Tung Oil

World tung oil production (including oil equivalent of seed production) for 1980/81 was estimated by the USDA at 90 thousand tonnes, compared with 100 thousand tonnes estimated for 1979/80 and 101 thousand for 1978/79.

The United States is the world's largest importer of this industrial oil. U.S. imports of tung oil in 1980 were down 8 percent to 8,787 tonnes from 9,620 tonnes in 1979, primarily because of a 31 percent decline in the Jan.–Oct. 1980 period versus the same period in 1979. Other major importers of tung oil are the Soviet Union, Japan, Poland, and the Federal Republic of Germany.

The People's Republic of China is, by far, the world's largest producer of tung oil, followed in most years by Argentina and Paraguay. These three countries are also the major exporters of tung oil.

Supply and Distribution of Tung Oil in the United States In Thousands of Pounds

Year	Stocks Jan. 1	Production	Imports	Exports[3]	Total Supply	Appar. Disappearance	Factory Consumption							Acquired By CCC Oil
							Total	Paint & Varnish	Linol. & Oilcloth	Printing Ink	Lubricants[2]	Resins & Plastics	Drying Oil Ind.	
1969	60,700	5,000	22,464	1,800	86,400	31,404	31,300	21,400	[4]	[4]	[4]	5,000	31,000	5,500
1970	54,902	4,000	18,151	2,110	74,943	28,233	28,400	20,000				3,900	28,000	5,700
1971	47,710	100	22,239	1,962	68,087	23,282	27,200	17,100				3,700	23,000	3,800
1972	44,703	2,250	21,597	1,257	67,273	33,307	31,800	18,100				3,800	31,000	100
1973[1]	33,986	500	21,796	1,955	54,327	28,589	31,000	20,000				4,000	28,000	2,300
1974[1]	25,738	—	21,037	700	46,075	34,858	34,000	24,000				2,000	35,000	—
1975[1]	11,217	—	30,063	1,700	39,580	33,228	43,000	26,000				4,000	33,000	—
1976[5]	6,352	—	34,509	1,600	39,261	36,961	25,000						35,000	—
1977[5]	2,300	—	18,821	1,200	19,900	16,900	20,100						19,000	
1978[5]	3,000		17,912				16,900							
1979[5]			20,038											
1980														

[1] Preliminary. [2] Also including greases. [3] Also including re-exports. [4] Included in misc. to avoid disclosure of figures for individual companies. [5] Estimate. *Source: Economic Research Service, U.S.D.A.*

Average Price of Tung Oil[1] (Imported-Drums) F.O.B. New York In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1969	14.8	14.8	14.8	14.8	14.8	14.8	17.1	17.8	17.8	19.4	20.2	24.0	17.1
1970	24.0	23.9	25.4	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	25.6
1971	26.0	26.0	26.0	26.0	26.0	24.0	18.0	16.1	15.5	15.5	15.5	15.5	20.8
1972	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5
1973	15.5	15.5	15.5	15.5	17.1	20.0	N.A.	N.A.	31.0	31.2	33.8	35.0	23.0
1974	35.0	36.0	39.0	39.0	38.3	35.5	35.5	35.5	35.0	35.2	38.9	41.0	37.0
1975	41.0	41.0	41.0	41.0	41.0	41.0	41.0	35.4	32.2	33.0	33.0	33.0	37.8
1976	33.0	33.2	34.0	34.0	33.8	37.0	54.0	65.0	65.0	65.0	65.0	65.0	48.7
1977	65.5	72.7	97.0	142.4	147.0	147.0	128.2	100.0	100.0	100.0	100.0	100.0	108.3
1978	100.0	100.0	100.0	100.0	100.0	100.0	100.0	87.5	87.5	87.5	68.5	66.4	91.5
1979	68.9	68.9	67.9	69.0	69.0	69.0	69.0	69.0	62.5	55.0	51.0	51.0	64.2
1980	51.0	55.1	55.8	53.0	51.1	48.3	45.2	43.7	46.6	56.5	65.5	67.2	53.3
1981													

[1] Carlots, imported, f.o.b. New York. *Source: Economic Research Service, U.S.D.A.*

Utilization of Oils and Fats in Drying-Oil Industries in the United States[1] In Millions of Pounds

Year	Linseed Oil	Tall Oil	Tung Oil	Oiticica Oil	Castor Oil	Fish Oil	Soybean Oil	Other Primary Fats & Oils	Secondary Fatty Materials	Total
1969	271	88	31	12	61	63	191	22		738
1970	230	75	28	—	28	25	169	49		604
1971	276	71	23	—	39	28	148	44		631
1972	206	73	31	—	54	32	141	33		570
1973	322	79	28	—	46	24	142	45		686
1974	194	67	35	—	26	27	172	42		563
1975	125	55	33	—	5	16	144	51		429
1976	170	71	35	—	39	10	164	58		547
1977[2]	156	85	19	—	63	11	172	37		543
1978	NO LONGER AVAILABLE									

[1] Paint, varnish, linoleum, oilcloth, and printing ink. [2] Preliminary. *Source: Economic Research Service, U.S.D.A.*

Tungsten

The extreme hardness of tungsten carbide, the most important class of tungsten material, at temperatures exceeding 1,000° C makes it a preferred metalworking material for cutting edges of machine tools subject to intense wear or abrasion, and for metal surfaces in forming and shaping dies. The mining and petroleum industries use considerable amounts of tungsten carbide in drill bits, in the cutting edges of earthmoving equipment, and in crushing machinery. Tungsten carbide is also used widely in wear parts of transportation and electrical equipment.

More than 90 percent of the world's estimated tungsten resources are located outside of the United States, with almost 55 percent located in the People's Republic of China. Tungsten contained in extremely low-grade domestic resources, such as the Searles Lake, California brines, and metal values in sludges and scrap could provide much of the supply required to meet U.S. forecast demand. But, unless economic methods of recovering tungsten from these low-grade sources are developed, greater imports will be required. (Net imports of tungsten represented about 54 percent of apparent U.S. consumption in 1980, according to the U.S. Bureau of Mines.)

Estimated world production and consumption of tungsten in concentrate each increased about 3 percent in 1980, compared with 1979, as demand for tungsten carbide in cutting and wear-resisting (including hard-surfacing) increased substantially.

U.S. imports of tungsten concentrate (thousands of pounds, contained tungsten) for consumption in 1980 were about unchanged from a year earlier, but reported consumption was 5.4 percent lower than in 1979. Net U.S. production of intermediate tungsten products was 5.3 percent lower than in 1979, whereas reported consumption was up 3.5 percent from the year earlier level.

At the end of 1980, U.S. stocks of ammonium para tungstate (APT) in thousands of pounds contained tungsten were about 10 percent larger than at the end of 1979.

Tungsten concentrate is sold in units of tungsten trioxide (WO_3). A short ton unit (stu) of WO_3 is equivalent to 1 percent of a short ton, or 20 pounds of WO_3, and contains 15.86 pounds of tungsten (W). In 1980, the U.S. spot quotation for tungsten concentrate in *Metals Week* ranged from $118 to $135 per stu of WO_3 and averaged $130. The European prices, as quoted in *Metal Bulletin* (London), ranged from $141 to $154 per metric ton (tonne) unit of WO_3 and averaged $131/stu for the year.

The General Services Administration (GSA), on the basis of sealed bids, sold 2.6 million pounds of tungsten in excess stockpile tungsten concentrate during the first 11 months of 1980, of which 1.4 million pounds was for domestic use and 1.2 million for export. As of November 30, 1980, the stockpile goal was 55,450,000 pounds of ore and concentrate, and the inventory of stockpile-grade material was 57,762,000 pounds of contained tungsten.

End uses of tungsten products in the U.S. during 1980 as a percentage of consumption were approximately as follows: tungsten carbide cutting and wear-resistant materials (including welding and hard facing rods and materials)—66 percent; tungsten metal mill products—17 percent; tool, alloy, stainless, and heat-resisting steels—8 percent; superalloys—4 percent; chemicals and ceramics—3 percent; other uses—2 percent.

World Concentrate Production of Tungsten In Thousand Pounds of Contained Tungsten (60% WO_3 Basis)

Year	Japan	Argentina	Australia	Bolivia	Brazil	Burma	China	Rep. of Korea	Canada	Portugal	Spain	Thailand	U.S.S.R.	United States	World Total
1968	1,177	408	2,549	3,904	957	430	17,600	4,614	2,855	3,049	273	1,096	13,700	7,496	68,380
1969	1,343	322	2,756	4,059	1,914	353	17,600	4,345	3,223	2,934	443	1,442	14,300	6,904	70,749
1970	1,882	317	2,800	4,068	2,549	487	13,200	4,564	2,956	2,390	899	1,565	14,800	9,625	71,360
1971	1,609	304	3,184	4,608	2,989	842	15,400	4,784	3,667	2,176	897	5,527	15,400	6,900	78,055
1972	1,980	348	3,487	4,954	2,515	1,213	16,500	3,966	3,527	3,093	798	7,370	15,900	8,150	84,952
1973	2,072	183	2,917	4,264	2,194	1,133	17,600	4,504	3,680	3,336	690	5,295	16,300	7,575	83,612
1974	1,786	207	3,128	4,471	2,189	750	18,700	5,046	2,822	3,236	765	4,497	16,800	7,381	82,832
1975	1,693	190	4,145	5,661	2,496	1,091	19,800	5,298	2,584	3,139	774	3,609	17,200	5,588	84,508
1976	1,786	137	4,384	7,015	2,120	608	19,800	5,703	3,790	2,776	725	4,519	17,600	5,869	90,899
1977	1,693	154	5,198	6,515	2,672	613	19,800	5,809	3,994	2,216	679	4,859	18,100	6,022	92,943
1978	1,678	174	5,910	6,288	2,557	1,038	22,000	5,734	5,045	2,407	602	7,026	18,700	6,901	100,127
1979[1]	1,700	170	6,984	6,865	2,595	1,100	29,000	5,769	5,726	3,020	700	4,028	19,000	6,646	106,590
1980[2]			7,500	6,200	3,000	1,100	29,000	5,700	6,900	3,100		4,300	19,500	7,000	109,500
1981															

[1] **Preliminary.** [2] **Estimate.** ***Source: Bureau of Mines***

Salient Statistics of Tungsten in the U.S. In Thousands of Pounds of Contained Tungsten

				Consumption of Tungsten Products by End Uses										Stocks at End of Year	
					Steel										
Year	Net Import Reliance as a % of Apparent Consumption	Production[1]	Shipments from Mines[1]	Total Consumption	Tool	Stainless & Heat Assisting	Alloy Steel[3]	Superalloys	Cutting & Wear Resistant Materials	Pdt's. Made from Metal Powder	Cast Irons	Chemicals & Ceramic	Exports	Consumers & Dealers	Producers[1]
1968		8,663	9,042	11,038	N.A.	N.A.	322	N.A.	N.A.	N.A.	N.A.	362	623	574	626
1969		7,805	7,910	13,053	1,951	N.A.	381	N.A.	7,275	2,898	N.A.	406	7,151	1,006	519
1970		9,625	9,312	16,700	1,475	N.A.	185	N.A.	7,028	3,306	N.A.	N.A.	19,470	1,467	787
1971		6,900	6,827	11,622	1,420	187	149	209	5,082	2,044	16	381	2,006	2,657	863
1972		8,150	7,045	14,107	1,451	173	157	429	6,657	2,525	14	179	95	2,229	1,966
1973	66	7,575	7,059	15,386	2,015	211	353	606	10,000	2,660	6	444	90	1,446	225
1974	68	7,381	7,836	16,298	2,045	258	641	607	12,239	2,673	1	159	1,187	1,565	529
1975	55	5,588	5,490	14,012	892	158	139	379	8,355	1,490	4	310	1,316	1,958	531
1976	53	5,830	5,869	16,107	1,133	126	244	435	10,402	2,432	4	704	1,729	1,002	150
1977	52	6,008	6,022	17,100	1,124	175	262	527	10,880	2,482	2	275	1,283	826	124
1978	56	6,896	6,901	18,806	1,385	236	152	641	11,550	2,725	1	393	1,853	1,424	87
1979[2]	58	6,643	6,646	21,589	1,554	305	173	596	12,969	3,348	—	506	1,929	1,538	84
1980[4]	54		7,000	21,000	1,300	200	100	1,500	9,000	3,250		1,000	2,400	1,400	200
1981															

[1] Primary concentrates. [2] Preliminary. [3] Other than tool. [4] Estimate. *Source: Bureau of Mines*

U.S. Imports[1] of Tungsten Ores and Concentrates and Ferrotungsten
In Thousands of Pounds (Tungsten Content)

	Tungsten Ores and Concentrates Imported (For Consumption)												Ferrotungsten Imported			
Year	Australia	Bolivia	Brazil	Canada	Rep. of Korea	Mexico	Portugal	Spain	Thailand	Peru	Total 1,000 Pounds	Value Mil. $	Austria	France	West Germany	Total 1,000 Lbs.
1968	73	55	—	1,035	—	2	40	—		506	1,743	3.3	0	0	0	0
1969	101	—	—	1,046	—	1	99	—		256	1,503	3.4	0	0	0	0
1970	—	—	—	1,234	—	12	—	—		38	1,284	3.2	0	0	0	0
1971	58	—	—	203	—	81	—	—		76	418	1.0	0	0	0	30
1972	392	780	124	1,634	370	90	9	—	883	814	5,739	12.1	25	10	88	814
1973	320	2,183	465	3,311	548	348	176	79	954	1,039	10,834	23.7	333	26	157	1,107
1974	87	2,065	266	1,633	364	336	1,635	95	1,527	1,375	11,096	40.7	235	112	—	808
1975	390	787	187	1,600	513	419	197	14	629	866	6,570	31.7	132	34	18	418
1976	172	580	2	1,343	202	417	420	21	588	863	5,301	28.3	260	246	53	844
1977	128	1,580	108	2,046	69	647	199	—	518	626	6,919	55.9	282	—	18	505
1978	211	2,012	2	3,030	230	850	—	—	840	180	9,138	67.7	241	110	63	575
1979[2]	398	2,980	26	3,127	84	607	195	20	1,246	810	11,352	84.7	104	83	25	570
1980[3]	300	2,800	30	3,400	25	500	500	100	1,000	600	11,000		70	50	20	450
1981																

[1] Imports for consumption. [2] Preliminary. [3] Estimate. *Source: Bureau of Mines*

Tungsten Prices In Dollars

	Markets		Reported Value, F.O.B. U.S. Mine[2]				Markets		Reported Value, F.O.B. U.S. Mine[2]		
Year	U.S.[1]	European	Total (Mil. $)	Avg. per Unit of WO_3	Avg. per Lb. of Tungsten	Year	U.S.[1]	European[1]	Total (Mil. $)	Avg. per Unit of WO_3	Avg. per Lb. of Tungsten
1972			18.1	40.77	2.56	1977	148.88	155.03	55.1	145.03	9.15
1973			19.2	43.04	2.71	1978	128.19	130.43	56.7	130.29	8.22
1974			37.4	75.73	4.77	1979	127.31	125.95	55.8	133.13	8.27
1975			29.1	84.05	5.30	1980[3]	130.00	131.00			
1976	—	103.68	37.3	100.70	6.35	1981					

[1] Conc., Stu WO_3, Average (a short ton unit [stu] of tungsten trioxide [WO_3] contains 15.862 pounds of tungsten. [2] Values apply to finished concentrate & are in some instances f.o.b. custom mill. [3] Preliminary. *Source: Bureau of Mines*

Turkeys

The 1980 turkey crop totaled a record 164.7 million head, up 5 percent from 1979. Heavy breed turkeys increased 3 percent to 150 million; light breeds increased 30 percent to 14.7 million.

Turkey meat output in federally inspected plants totaled a record 2,303 million pounds (ready-to-cook weight), up almost 6 percent from 1979. The number of turkeys inspected was up 7 percent but, with more light breeds, the average weight was almost 2 percent lighter. Also, unfavorable returns in the second quarter encouraged producers to market early in order to limit their losses. Moreover, the hot summer weather that slowed rates of growth caused turkey weights to average less in 1980.

More turkey meat continued to go for further processing in 1980. Further processing of turkey other than whole birds increased about 14 percent from 1979 to 908.6 million pounds. This equaled about 39 percent of total certified ready-to-cook federally-inspected turkey products, up from about 37 percent in 1979. Cut-up turkey increased 21 percent to 635.8 million pounds. Production of further-processed of whole birds (those which have been injected, basted, marinated, or smoked and packaged whole) totaled 650.6 million pounds, a 21-percent gain.

Turkey prices sagged to low levels in the first half of 1980 due to large supplies of competing meats, a deteriorating economy, and large supplies of frozen turkeys. Prices improved after midyear when supplies of competing meats declined, the economy began improving, and frozen stocks were worked down.

Turkey producers made excellent returns in the last half of 1980 and increased hatchery activity. In late 1980, producers in the 20 major turkey-producing States indicated they planned to raise 3 percent more birds in 1981 than in 1980. Heavy breed intentions were up 4 percent, but light breeds were down 13 percent. These 20 States accounted for 96 percent of the turkeys raised in 1980. The inventory of breeder hens indicated there would be ample eggs to meet intentions; turkey breeder hens on December 1, 1980, were 6 percent above a year earlier. However, the number of turkeys actually raised in 1981 could vary from growers' intentions depending on feed prices, supply and price of hatching eggs and poults, and prices received by growers for turkeys.

In calendar year 1980, USDA purchased the equivalent of 100 million pounds of ready-to-cook turkey for use in the school lunch and other domestic food programs. Of this, 28 million pounds were purchased under the 1979 program. In calendar year 1980 USDA bought 48 million pounds of young turkey, 6 million pounds of bulk pack turkey, and 29 million pounds of cooked turkey rolls. Total cost was $68 million. Purchases under the 1980 program ended January 28, 1981.

Salient Statistics of Turkeys in the U.S.

Year	Breeder Hens on Farms—Dec. 1			(Liveweight)			Ready-to-Cook Basis						In Cents Per Lb.			
										Consumption			Production Costs Live-Weight		Wholesale Ready-to-Cook	
											Civilian					
	Number	$ Value Per Head	Raised	Produced Million Lbs.	Price ¢ Lb.	Gross Income Million $	Production	Commercial Storage Jan. 1	Exports & Shipments	Military	Total	Per Capita Lb.	Feed	Total	Total Costs	3-City Composite Price
	In Millions		In Millions				Million Pounds	Million Pounds	Million Pounds	Million Pounds	Million Pounds					
1968	3.4		106.7	2,015	20.5	417	1,611	367	41	63	1,557	7.9				
1969	3.3	5.97	106.7	2,029	22.4	454	1,606	317	40	48	1,643	8.3				
1970	3.4	5.82	116.1	2,198	22.6	498	1,729	192	43	49	1,610	8.0				
1971	3.4	6.18	119.7	2,256	22.1	500	1,772	219	27	41	1,700	8.4				
1972	3.3	6.46	128.7	2,424	22.2	537	1,909	223	42	42	1,840	9.0	13.5	20.5	34.1	35.8
1973	3.6	9.47	132.2	2,452	38.2	936	1,933	208	54	31	1,775	8.5	25.6	33.1	50.6	64.2
1974	2.9	9.81	131.9	2,437	28.0	683	1,921	281	43	14	1,870	8.9	22.5	30.7	48.8	45.6
1975	3.1	10.81	124.2	2,277	34.8	793	1,803	275	53	19	1,811	8.6	22.1	30.7	49.4	55.1
1976	3.1	11.12	140.0	2,605	31.7	825	2,059	195	71	18	1,961	9.2	22.4	31.4	50.9	51.0
1977	3.0	11.32	136.4	2,562	35.5	910	2,023	203	56	11	1,991	9.3	22.6	31.6	51.4	56.2
1978	3.4	12.53	138.9	2,653	43.6	1,157	2,098	168	57	15	2,019	9.3	22.1	31.7	51.7	68.8
1979[1]	3.7	13.56	156.5	2,959	41.1	1,215	2,345	175	57	19	2,204	10.1	25.3	35.8	58.2	67.0
1980[2]	3.9						2,474	240	80	15	2,422	11.0	26.1	37.1	61.0	66.0
1981								198								

[1] Preliminary. [2] Estimate. *Source: Economic Research Service, U.S.D.A.*

Turkey Per Capita Consumption in the U.S. by Quarters In Pounds

Year	First	Second	Third	Fourth	Total	Year	First	Second	Third	Fourth	Total
1968	.9	1.1	1.9	4.0	7.9	1975	1.1	1.4	2.0	4.1	8.6
1969	1.0	1.2	2.0	4.1	8.3	1976	1.2	1.5	2.1	4.4	9.2
1970	.9	.9	2.1	4.1	8.0	1977	1.3	1.5	2.3	4.2	9.3
1971	1.0	1.2	2.1	4.1	8.4	1978	1.3	1.7	2.2	4.1	9.3
1972	1.1	1.3	2.2	4.4	9.0	1979[1]	1.5	1.9	2.4	4.3	10.1
1973	1.2	1.3	2.1	3.9	8.5	1980[1]	1.9	2.1	2.8	4.2	11.0
1974	1.2	1.6	2.0	4.1	8.9	1981					

[1] Preliminary. *Source: Economic Research Service, U.S.D.A.*

TURKEYS

Strong demand pushed turkey exports 50 percent higher than in 1979. Exports of whole turkey and turkey parts (excluding livers) totaled 75 million pounds vs. 50 million in 1979. Egypt was a major customer, along with the United Kingdom and Federal Republic of Germany. Turkey parts accounted for 80 percent of the sales, up from 73 percent in 1979.

Turkey meat consumption in 1980 totaled an estimated record 11 pounds per person, up from 10.1 pounds in 1979. Consumption was greater than a year earlier in the first three quarters but slipped below 1979 later. In 1980, there was a 40-million-pound reduction in cold storage stocks to help maintain consumption at high levels.

Second-Half 1981 Turkey Prospects

If expectations of competing meat supplies, consumers' disposable incomes, and turkey cold storage stocks are realized, and July–December 1981 turkey meat output increases around 1 percent from a year earlier, the price of 8–16 pound young hen turkeys at New York could average 1 to 3 cents above the 71 cents of July–December 1980.

Storage Stocks of Turkeys (Frozen) in the United States In Millions of Pounds

Year	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
1969	317.1	293.6	254.4	201.4	155.0	123.0	119.3	162.7	237.1	329.4	435.6	283.8
1970	191.9	162.1	132.7	101.1	81.5	73.7	94.7	155.5	237.9	343.0	450.5	313.1
1971	218.9	207.1	177.3	146.0	119.4	111.5	140.3	202.8	307.6	389.0	475.2	308.7
1972	223.1	208.0	178.5	144.5	121.3	111.1	143.4	213.2	314.0	408.5	472.9	297.3
1973	208.1	188.4	152.6	115.4	91.3	88.1	137.1	199.4	261.2	350.7	450.5	321.1
1974	281.0	274.0	250.5	235.9	225.0	227.4	265.8	335.8	431.8	528.7	554.6	372.0
1975	275.0	267.1	239.9	207.3	180.2	162.7	193.2	248.6	328.6	409.8	472.4	286.2
1976	195.2	186.8	160.7	140.7	114.5	120.8	177.3	261.8	370.3	459.7	512.3	298.8
1977	203.4	190.3	167.8	142.3	130.3	138.2	201.4	253.6	329.9	409.3	444.5	269.4
1978	167.9	168.2	136.6	113.0	101.1	103.9	152.8	213.6	301.2	373.3	425.4	236.2
1979	175.1	170.7	154.7	135.7	128.0	153.1	200.9	272.5	382.5	432.3	445.5	281.2
1980[1]	240.0	246.8	225.0	208.8	210.8	236.6	288.6	325.8	384.0	398.8	418.3	257.3
1981[1]	198.3	207.9	208.4									

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

Wholesale Price of Frozen Eviscerated Tom Turkeys,[1] N.Y.C. In Cents per Pound

													Yearly Avg.		
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Avg.	Hens (12–14 lbs.)	Farm Price[2]
1969	36.7	36.5	36.5	36.5	36.6	38.0	39.2	39.3	39.6	39.9	42.1	43.6	38.7	38.0	21.3
1970	44.8	47.0	49.1	49.9	50.4	50.8	50.6	50.5	49.5	43.1	42.2	43.4	47.6	43.5	23.6
1971	43.5	43.3	41.7	32.7	40.4	40.5	41.4	42.5	42.5	41.2	42.3	43.8	41.4	39.6	21.9
1972	43.8	43.6	34.1	43.4	42.6	42.1	40.3	39.1	38.5	38.9	41.1	42.1	40.8	38.5	22.1
1973	45.1	48.6	56.0	57.7	60.6	67.8	69.4	81.1	86.0	84.2	80.2	71.2	67.3	62.2	34.8
1974	60.7	54.2	51.9	45.3	48.4	52.5	52.6	55.8	55.7	54.4	56.3	58.8	53.9	51.7	28.8
1975	59.0	56.7	55.9	52.0	52.6	56.5	59.5	61.8	64.3	66.8	69.9	70.0	60.3	57.0	33.6
1976	69.0	69.0	69.9	70.0	70.6	71.0	71.0	71.0	71.0	71.0	72.8	73.0	70.8	52.4	31.8
1977	72.5	70.2	68.8	68.8	69.0	70.1	72.1	73.2	73.6	74.6	75.5	78.2	72.2	57.3	34.8
1978	78.5	78.5	78.9	79.0	82.2	86.1	86.8	87.0	87.0	89.1	91.6	90.7	84.6	70.3	42.0
1979	91.0	90.8	90.0	89.5	90.9	91.0	91.0	91.5	91.4	93.1	94.5	92.9	91.5	72.1	42.2
1980	88.2	84.8	80.4	78.1	78.0	78.9	82.0	87.3	90.1	91.3	88.5	89.5	84.8	67.8	39.2

[1] Heaviest weights quoted. [2] Live turkeys. *Source: Economic Research Service, U.S.D.A.*

Turkeys Certified as Wholesome in Federally Inspected Plants Ready-To-Cook Weight In Millions of Lbs.

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1969	42.6	21.3	23.4	21.0	39.0	85.4	145.5	185.3	225.8	266.5	229.7	147.4	1,433
1970	40.5	22.2	22.1	27.6	44.9	109.5	172.1	212.0	244.6	276.9	244.9	149.2	1,567
1971	49.9	31.5	42.7	47.7	63.1	127.7	177.1	221.2	235.8	256.0	242.9	146.1	1,642
1972	57.6	45.2	45.8	44.3	74.6	149.0	186.9	254.6	241.7	282.7	261.3	152.7	1,797
1973	69.7	41.6	45.3	55.8	84.2	142.9	185.0	234.1	212.3	272.6	269.9	174.6	1,788
1974	97.3	59.8	58.9	80.1	113.2	159.7	213.1	237.2	220.2	261.1	215.2	119.9	1,836
1975	64.9	47.1	54.4	68.7	81.9	138.4	193.2	203.3	229.0	257.5	220.2	157.5	1,716
1976	76.3	61.7	68.6	79.9	106.5	182.2	213.9	243.8	252.8	256.6	261.5	146.4	1,950
1977	70.5	58.7	80.3	78.9	110.0	176.5	189.6	244.4	238.2	250.3	246.8	148.2	1,892
1978	81.8	59.7	86.3	80.8	129.3	189.5	199.9	248.8	230.9	271.2	248.9	156.3	1,983
1979	99.3	77.2	95.0	112.3	157.3	195.9	219.2	267.7	233.0	297.5	261.9	165.5	2,182
1980	141.1	109.4	123.2	141.4	177.5	204.2	240.2	225.5	239.8	271.5	241.8	187.3	2,303

Source: Economic Research Service, U.S.D.A.

Turpentine and Rosin

Domestic production of gum turpentine in the 1980/81 crop year, which began April 1, 1980, was estimated by the USDA at 6,260 50-gallon barrels, off 8 percent from 1979/80 production of 6,740 barrels. Most turpentine production, including steam distilled, sulfate, and gum, is used in the chemical and rubber industries.

Gum rosin production in 1980/81 was estimated at 22,420 drums (517 pounds each), a decrease of 8 percent from 1979/80 production of 24,200 drums. Gum rosin's major use is in paper and paper size, followed by chemicals, rubber, ester gums and synthetic resin.

The U.S. is a net importer of both gum turpentine and gum rosin. Gross imports of gum turpentine during the April 1980–March 1981 period totaled 10,690 barrels, a 49 percent increase from the previous season. Gross imports of gum rosin during the April 1980–March 1981 season totaled 28,490 drums, down 30 percent from the 1979/80 season's 40,650 drums.

Total stocks of gum turpentine on March 31, 1981, the end of the marketing year, were estimated at 800 barrels vs. total gum stocks on March 31, 1980 of 650.

Stocks of gum rosin at the end of the 1980/81 season on March 31, 1981 were estimated at 3,460 drums vs. March 31, 1980 gum stocks of 2,820 drums.

Gum rosin and gum turpentine are the processed derivatives of crude pine gum. The price of crude pine gum is supported through loans on crude pine gum and gum rosin. Although there is no loan rate on turpentine, the prospective market price of turpentine is taken into consideration in setting the rosin loan rate.

U.S. Production of Gum Turpentine and Miscellaneous Naval Stores In Barrels of 50 Gallons

Crop Year—April 1 to March 31	Exports of Pine Oil	Gum Turpentine				Miscellaneous Naval Stores			
		Florida	Georgia	Other States	Total	Stocks of Pine Oil (Mar. 31)	Pine Oil (All Sources[3])	Other Steam Distilled Terepenes	Stocks of Other Steam Distil. Terp. (Mar. 31)
1968–9	77,540	[2]	43,750	8,570	50,410	N.A.	289,190	101,000	N.A.
1969–0	73,800	[2]	30,790	4,200	34,990	N.A.	277,740	98,880	N.A.
1970–1	80,440	[2]	22,350	3,480	25,830	16,280	276,940	79,470	N.A.
1971–2	74,510	[2]	24,850	3,510	28,360	42,990	290,410	82,850	20,560
1972–3	76,100	[2]	23,040	3,510	26,550	40,070	260,260	77,500	60,170
1973–4	90,590	[2]	18,610	2,800	21,410	22,150	249,450	77,610	92,170
1974–5	94,370	[2]	13,210	2,400	15,610	22,510	213,260	80,880	102,720
1975–6	72,070	[2]	18,300	2,390	20,690	25,370	171,220	40,660	30,200
1976–7[1]	69,310				17,420	32,830	190,060	45,220	21,860
1977–8[1]	71,250				14,530	26,730	189,780	46,430	19,580
1978–9[1]	103,370				9,740	11,840	192,680	52,880	7,500
1979–0[4]	193,340				6,740	17,460	192,700	59,070	10,040
1980–1[4]									

[1] Preliminary. [2] Included in other states. [3] Includes production from imported pine wood extract. [4] Forecast.
Source: Crop Reporting Board, U.S.D.A.

Supply and Distribution of Turpentine in the United States In Thousands of Barrels (50 Gallon Barrels)

Crop Year Beginning April 1	April 1 Carryover			Production			Imports For Consumption	Available Supply			Exports	App. Consumption		
	Gum	Wood	Total	Gum	Wood	Total		Gum	Wood	Total		Gum	Wood	Total
1968–9	16.3	89.1	105.4	50.4	601.8	652.2	22.7	89.4	690.9	780.3	40.8	71.0	581.8	652.8
1969–0	11.0	75.7	86.8	35.0	582.4	617.4	23.1	69.1	658.1	727.2	35.0	50.2	560.2	610.4
1970–1	13.4	68.5	81.8	25.8	550.0	575.8	24.1	63.3	618.4	681.8	39.7	44.3	495.8	540.1
1971–2	12.9	89.1	102.1	28.4	540.3	568.7	22.7	64.0	629.4	693.4	41.6	48.9	501.0	549.9
1972–3	11.5	90.4	101.9	26.6	539.5	566.1	42.3	80.4	629.9	710.2	89.2	65.3	446.6	511.9
1973–4	14.2	94.9	109.1	21.4	509.2	530.6	33.6	69.3	604.1	673.3	37.3	55.1	480.3	535.3
1974–5	11.0	89.8	100.8	15.6	471.4	487.0	29.7	56.3	561.2	617.5	16.3	48.9	481.6	530.5
1975–6	5.4	65.4	70.7	20.7	426.9	447.6	58.6	84.7	429.3	577.0	4.2	73.7	385.5	459.2
1976–7	9.6	104.0	113.6	17.4	464.8	482.2	16.3	42.7	569.4	612.1	20.3	33.3	430.8	464.1
1977–8	7.4	120.4	127.8	14.5	462.6	477.1	7.9	29.4	583.5	612.9	19.4	23.7	478.8	502.6
1978–9	4.8	86.1	90.9	9.7	498.0	507.7	7.1	21.0	584.7	605.7	15.3	17.2	498.6	515.8
1979–0[1]	3.3	71.3	74.6	6.7	521.1	527.8	7.9	17.8	592.5	610.3	13.5	14.0	509.5	523.5
1980–1[2]	3.2	70.1	73.3											
1981–2														

[1] Preliminary. [2] Estimate. *Source: Crop Reporting Board, U.S.D.A.*

United States Industrial Consumption of Rosin and Turpentine, by Industries

Beginning April 1	Rosin[1] (Drums of 520 Lbs. Net[2]) Chemicals & Rubber	Ester Gum & Synthetic Resins	Paint, Varnish & Lacquer	Paper & Paper Size	Other Industries	Total	Turpentine (Barrels of 50 Gallons) Chemicals & Rubber	Paint, Varnish & Lacquer	Other Industries	Total
1968–9	720,720	243,710	56,920	518,230	61,950	1,601,530	595,380	2,720	3,400	601,500
1969–0	701,760	230,940	54,680	499,790	53,520	1,540,690	593,470	1,900	3,220	598,590
1970–1	623,610	218,290	57,480	519,320	43,120	1,461,820	529,350	1,620	5,260	536,230
1971–2	575,960	216,360	71,430	514,700	50,650	1,429,100	540,980	2,160	1,400	544,540
1972–3	565,000	244,790	52,360	470,000	49,380	1,381,530	461,940	1,390	4,170	467,500
1973–4	558,690	264,890	50,320	346,470	51,100	1,271,470	437,510	940	4,920	443,370
1974–5	482,050	207,180	28,140	306,840	79,140	1,103,350	431,670	990	7,070	439,730
1975–6	384,270	222,340	16,480	371,650	58,810	1,045,550	419,490	870	3,110	423,470
1976–7	445,870	283,060	22,260	370,370	81,220	1,202,780	476,160	740	3,690	480,590
1977–8	376,040	241,940	22,260	357,560	75,750	1,073,550	464,150	1,020	8,110	473,280
1978–9	362,100	233,130	19,440	463,610	89,540	1,167,820	496,840	650	7,780	505,270
1979–0[3]	353,650	268,020	21,660	352,510	68,690	1,064,530	497,720	410	6,180	504,310
1980–1										

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[1] Includes B-wood resin. [2] Gum rosin in drums of 517 lbs. [3] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

Supply and Distribution of Rosin in the United States In Thousands of Drums (520-lb. Net Weight Drums)

Crop Year Beginning April 1	April 1 Carryover Gum	Wood	Total	Production Gum	Wood	Total	Imports For Consumption	Available Supply Gum	Wood	Total	Exports	Apparent Consumption Gum	Wood	Total
1968–9	693.8	266.2	960	171.0	1,675	1,845	1	865	1,941	2,806	644	178	1,254	1,431
1969–0	495	236	731	119	1,623	1,741	1	614	1,859	2,473	645	172	1,204	1,377
1970–1	327	124	451	88	1,568	1,656	—	415	1,692	2,107	569	145	1,132	1,277
1971–2	147	114	261	92	1,539	1,631	6	245	1,653	1,898	456	129	1,131	1,258
1972–3	51	133	184	89	1,540	1,629	24	164	1,673	1,837	466	78	1,165	1,244
1973–4	15	112	127	74	1,509	1,584	106	195	1,622	1,817	418	136	1,156	1,291
1974–5	33	75	108	54	1,252	1,306	162	250	1,327	1,576	268	135	890	1,026
1975–6	97	186	283	72	1,016	1,088	21	190	1,202	1,392	174	117	868	985
1976–7	60	173	232	61	1,296	1,357	25	135	1,480	1,615	280	85	1,069	1,154
1977–8	36	145	181	51	1,250	1,301	31	114	1,399	1,513	215	79	987	1,066
1978–9	21	211	232	35	1,304	1,339	55	97	1,528	1,626	328	59	1,023	1,082
1979–0[1]	20	195	215	24	1,339	1,363	52	93	1,538	1,631	396	56	1,041	1,097
1980–1[2]	19	119	138											
1981–2														

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[1] Preliminary. [2] Estimate. *Source: Crop Reporting Board, U.S.D.A.*

U.S. Market Prices & Value of Gum Naval Stores In Dollars

Crop Yr. Beg. April	Avg. Price Received By Producers[1]	Market Price Turpentine, Per Gallon	Rosin, Per 100 Lbs.	Market Value of Production Turpentine	Rosin	Crop Yr. Beg. April	Avg. Price Received by Producers[1]	Market Price Turpentine, Per Gallon	Rosin, Per 100 Lbs.	Market Value of Production Turpentine	Rosin
				Thousand Dollars						Thousand Dollars	
1967–8	31.00	.574	10.36	1,944	11,966	1974–5	84.36	1.389	35.92	1,084	10,106
1968–9	31.24	.770	10.45	1,941	9,241	1975–6	59.59	1.585	25.15	1,640	9,338
1969–0	36.57	1.138	11.80	1,991	7,244	1976–7	59.46	1.427	24.46	1,278	7,971
1970–1	47.37	1.200	15.03	1,550	6,818	1977–8	65.46	1.425	25.35	1,035	6,702
1971–2	51.14	1.200	16.93	1,702	6,210	1978–9	67.82	1.610	27.54	784	4,925
1972–3	55.17	1.046	18.89	1,389	8,694	1979–0	82.19	2.036	35.04	686	4,385
1973–4	60.97	.806	22.72	863	8,737	1980–1					

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[1] Per standard barrel for commercial crude gum delivered at central stills. *Source: Economic Research Service, U.S.D.A.*

Uranium

The U.S. produced 21,850 tons of uranium (U_3O_8) in 1980, according to preliminary estimates of the U.S. Department of Energy (DOE). Production was up almost 17 percent from the DOE revised 1979 estimate of 18,730 tons. Production in 1980 included 3,340 tons from other (non-uranium mine) sources, of which 800 tons were produced as a by-product of phosphoric acid production.

The increase in production was accomplished in the face of closings of large amounts of the industry's most inefficient mines and mills. It was reported that up to 25 percent of the industry's work force was laid off during 1980. The increase in production despite the mine and mill closings was primarily attributed to large stockpiles of uranium ore that were milled after mine closures. Also, previously milled ore can be run through the mill and further amounts of U_3O_8 can be recovered. Such activity is likely to continue.

Meanwhile, production was reported to be nearly 2½ times as large as trade estimates of 1980 consumption of 16.7 million pounds.

Nuclear Safety

The nuclear power industry is still reeling from the effects of the Three Mile Island (TMI) accident. The TMI-2 plant remains closed, with the burden of the clean-up and final cost unresolved. New plant construction is proceeding, but in a more regulated and costly environment. While the Nuclear Regulatory Commission (NRC) did grant the first post-TMI operating license (for commercial operation) in August 1980, no new construction permits were issued. Moreover, 16 reactor orders were canceled in 1980 and 69 reactor projects were significantly delayed.

The other major issue for the nuclear industry, the waste storage problem, remains unresolved, and little discernible progress was achieved in 1980.

Prices

Spot market uranium prices continued to decline throughout 1980, and into early 1981. Prices plunged from $41 per pound in late 1979 to $25 per pound in early 1981. Industry sources are reported to be projecting prices as low as $20 per pound during 1981.

Depressing prices were the continued reports of spot market sales by utility companies who have been burdened by large stocks (created by long term contracts with uranium producers) and high carrying costs.

Considering the twin problems of overproduction and negligible potential for near term growth in demand, there appears to be little prospect of improvement in uranium prices until new reactors are ordered and built. While the new Reagan Administration is considered to be pro nuclear power, the long regulatory approval process, high interest rates, and the long plant construction time suggests that any upswing for the nuclear power industry will take a long time to make itself felt in uranium consumption and demand.

Free-World Production of Uranium Oxide (U_3O_8) Concentrate In Thousands of Short Tons

Year	Argentina	Australia	Canada	Spain	Namibia	Gabon	France	Portugal	Niger	Malagasy Rep.	Sweden	South Africa	United States	World Total
1968	[1]	.3	3.7	.1	—	.6	1.6	.1	—	[1]	.1	3.9	12.6	23.0
1969	.1	.3	3.9	.1		.5	1.8	.1	—	—	.1	4.0	12.3	23.1
1970	.1	.3	4.1	.1		.4	1.9	.1	.1	—	.1	4.1	12.9	24.2
1971	.1	—	4.1	.1		.6	1.9	.1	.5	—	.1	4.2	12.3	23.9
1972	.1	—	4.9	.2		.6	1.9	.1	1.0	—	.1	4.0	12.9	25.6
1973	.1	—	4.8	.1		.8	2.0	.1	1.2	—	.1	3.4	13.2	25.5
1974	[1]	—	4.8	.1		1.0	2.1	.1	1.5		.1	3.5	11.5	24.6
1975	[1]	—	6.1	.1		1.2	2.2	.1	1.8		.1	3.2	11.6	26.7
1976[2]	[1]	.5	6.7	.2	.8	1.2	2.3	.1	1.9		.1	3.3	12.7	30.1
1977[3]		1.0	7.0	.2	1.5	1.2	2.4		2.1			4.0	14.0	33.8
1978[3]													15.0	43.0
1979[3]													15.1	50.0
1980[3]													18.0	

[1] Less than 50 tons. [2] Preliminary. [3] Estimate. *Source: Bureau of Mines*

U.S. Salient Statistics of Uranium (Depleted) Nonenergy Data in Short Tons

Year	Production	Imports[3]	Exports	Apparent Consumption (Nonenergy)	Price, Derby Metal $ Per Lb.
1976	17,591	188	341	1,700	2.00
1977	18,822	453	273	2,000	2.50
1978	15,763	373	590	2,200	2.50
1979[2]	15,116	852	1,531	2,500	3.25
1980[1]	18,000	1,000	7,000	3,500	4.50
1981					

[1] Estimate. [2] Preliminary. [3] For consumption. *Source: U.S. Bureau of Mines, Dept. of Energy*

Vanadium

Both production of vanadium from domestic ore and reported consumption of vanadium decreased in 1980, according to the Bureau of Mines.

Vanadium oxide from domestic sources in 1980 was produced by Union Carbide Corp., Rifle, Colo., and Wilson Springs, Ark.; Kerr-McGee Corp., Soda Springs, Ida.; Atlas Corp., Moab, Utah; and Cotter Corp., Canon City, Colo. Colorado Plateau uranium-vanadium ores, Arkansas vanadium ore, and Idaho ferrophosphorous were the domestic materials processed for recovery of vanadium pentoxide. In addition, other companies produced vanadium oxide from secondary or foreign materials.

Ferrovanadium was produced in the U.S. by six companies in 1980: Engelhard Minerals & Chemicals Corp., Foote Mineral Co., The Pesses Co., Reading Alloys Inc., Shieldalloy Corp., and Union Carbide.

Reported domestic consumption of vanadium decreased in 1980. About 90 percent of vanadium was consumed by the iron and steel industry as ferrovanadium or associated vanadium-carbon-iron materials. Despite increasing applications for vanadium-containing steels, especially high-strength low-alloy steels, weak demand by the automotive and other steel consuming industries resulted in lower demand for ferrovanadium. Demand for vanadium in superalloys and other non-ferrous alloys, used principally in the aircraft industry, was relatively strong compared to ferrous applications.

Exports of ferrovanadium were little changed compared to those of 1979, while imports of ferrovanadium declined. Imports of vanadium pentoxide were little changed, but imports of ores, slags, and residues declined substantially.

Prices for most vanadium materials were increased early in January, 1980. The quoted prices for Carvan and Ferovan were raised from $6.52 to $7.05 per pound of contained vanadium; the U.S. producer price for 80 percent ferrovanadium went from $7.09 to $7.75 per pound of contained vanadium; and the range of quoted prices for metallurgical pentoxide changed from $2.75–$4.04 per pound to $3.05–$4.04 per pound. The price of chemical grade vanadium pentoxide was increased from $3.35–$4.11 per pound in January to $3.35–$4.57 per pound in June. Late in 1980 several price increases of about 10 percent were announced which were to take effect at the beginning of 1981.

Worldwide demand for vanadium was weakened in 1980 by lower steel production in many areas. Production cutbacks were announced by companies in the Republic of South Africa due to weak demand.

World Production of Vanadium in Ores and Concentrates In Short Tons (of Contained Vanadium)

Year	USSR	Chile	China	Finland	France	Norway	South West Africa	South Africa	United States[1]	World Total[4]
1969	3,433	600		1,484	106	1,110	552	6,158	5,577	19,020
1970	3,800	610		1,450	—	1,110	730	6,530	5,252	20,502
1971	2,917	660		1,222	—	1,190	443	7,127	5,318	19,939
1972	2,720	720		1,312	—	1,060	650	8,230	4,887	20,239
1973	4,246	1,060		1,388	—	820	715	9,047	4,377	21,653
1974	3,230	640		1,635	—	500	903	8,984	4,870	20,762
1975	8,800	660		1,405	—	510	619	11,734	4,743	28,471
1976	8,800	1,199	N.A.	1,598	—	580	771	10,885	7,376	31,209
1977	10,000	950	N.A.	2,055		590	826	12,388	6,504	33,313
1978[2]	10,500	760	2,200	3,092		510	485	12,400	4,272	34,219
1979[3]	11,000	500	7,200	3,100		500		13,600	5,520	41,420
1980[3]	11,000	500	7,500					12,500	5,150	40,350

[1] Recoverable vanadium. [2] Preliminary. [3] Estimate. [4] Total only for countries shown. *Source: Bureau of Mines*

Salient Statistics of Vanadium in the United States In Short Tons of Contained Vanadium

Year	Vanadium in Ores & Concentrates		Prod. of Vanad. Pentoxide (V_2O_5)	Consumer Stocks Dec. 31	Vanadium Consumed by Uses[2]								$ Per Lb. Van. Pentoxide[3]	General Imports[5]	Exports	
	Mine Production	Recoverable Vanadium			Tool Steel	Cast Irons	Hi-Strength Low All.	Non-ferrous Alloys	Chemicals	Carbon	Full Alloy	Total			Ore & Concentrates[4]	Ferro-Vanadium (Gross Weight)
1969	5,737	5,577	10,542	1,057	648	55	2,739	618	196	1,296	N.A.	6,154	.95–1.80	2,250	258	644
1970	5,793	5,319	9,986	1,024	473	51	2,420	485	136	1,050	N.A.	5,134	1¾–2.6	2,000	973	2,155
1971	5,547	5,252	9,448	645	441	56	2,530	363	114	830	N.A.	4,802	1.68	2,350	260	676
1972	4,699	4,887	9,367	788	620	60	2,062	353	147	630	1,088	5,227	1.50	1,400	176	269
1973	4,117	4,377	8,683	1,291	997	56	2,252	527	163	687	1,544	6,393	1.50	2,600	232	1,416
1974	5,240	4,870	9,583	1,984	936	52	2,398	722	255	900	1,744	7,200	2.12	2,485	203	1,335
1975	5,213	4,743	8,674	1,141	413	59	2,004	425	239	931	1,307	5,501	2.76	2,895	215	1,018
1976	8,076	7,376	11,063	1,080	565	61	1,636	313	212	516	1,311	4,720	2.90	2,998	99	1,210
1977	7,565	6,504	9,297	845	549	35	1,800	323	110	688	1,419	5,261	2.90	2,812	192	658
1978	4,446	4,272	9,290	974	858	59	2,440	467	123	1,051	1,506	6,630	3.17	2,234	1,721	1,309
1979[1]	5,841	5,520	10,279	986	852	62	2,410	563	81	1,096	1,522	6,719	3.39	2,442	1,047	1,231
1980[6]		5,150		800	650	46	2,000	500	53	1,100	1,400	6,000	3.54	2,400	1,000	1,200

[1] Preliminary. [2] Represent about 90% of the total consumption. [3] Dealer export. [4] Also includes fused vanadium oxide. [5] Ores, slags, residues, & pentoxides. [6] Estimate. *Source: Bureau of Mines*

Wheat and Flour

Global wheat production in the 1980/81 season was estimated by the USDA in early May, 1981 at 438.9 million tonnes, compared with 1979/80 production of 422.0 million and the record output of 446.7 million tonnes in 1976/77. The USDA also projected 1981/82 world wheat production at 463.4 million tonnes, which would be a new record, if realized.

World utilization of wheat in 1980/81 was estimated to have more than kept pace with increasing production, totaling about 447.2 million tonnes, according to USDA estimate, compared with 444.3 million tonnes in 1979/80. As a result, 1980/81 ending stocks estimated at about 70 million tonnes were expected to represent no more than 16 percent of world utilization compared with 18 percent and 23 percent for the past two seasons. (It should be noted that stocks data are based on an aggregate of differing local marketing years and should not be construed as representing world stock levels at a fixed point in time.) World wheat trade in 1980/81 was expected to reach a record high of about 93 million tonnes, influenced greatly by heavy imports by the Soviet Union and China in response to reduced grain harvests. In the 1979/80 (July–June) year, the U.S. exported about 3.9 million tonnes of wheat to the U.S.S.R., while Australia exported 2.6 million tonnes and Canada—2.1 million. During the same period, the U.S. shipped some 2.1 million tonnes of wheat to the People's Republic of China, Australia—close to 3.6 million, and Canada—over 2.6 million tonnes.

In the United States, 1980/81 wheat supply totaled a record-large 3,274 million bushels, compared with 3,060 million in 1979/80. Total domestic disappearance of wheat was estimated at 795 million bushels, slightly more than the 783 million bushel domestic use in 1979/80, but well below the level of the two previous seasons.

U.S. wheat exports for the 1980/81 season were estimated at a record-large 1,525 million bushels, compared with 1,375 million in the 1979/80 season. China was, by far the single largest importer of U.S. wheat taking over 300 million bushels, more than double the combined exports to the next two most important single buyers of U.S. wheat—Japan and the Soviet Union. Imports by the latter country were limited to wheat purchased under the 5-year U.S./U.S.S.R. grain supply agreement which is scheduled to expire September 30, 1981 unless replaced by a new agreement. As of mid-May 1981, no discussions had been held concerning either consultations for any further purchases by the Soviet Union during the remainder of this final year of the 5-year agreement or negotiations for a new agreement. The 16-month partial embargo on U.S. grain sales to the Soviet Union was lifted on April 24, 1981.

The U.S. wheat export picture for 1980/81 was bolstered by record-large exports of Soft Red Winter wheat (SRW). Because of the record 1980/81 supply, SRW wheat was attractively priced for the export market. Foreign buyers responded to this situation, with China taking more than 200 million bushels of this class of wheat, constituting the largest single-country wheat sale since around 350 million bushels of U.S. wheat (mostly Hard Red Winter wheat) were exported to the Soviet Union in 1972/73. Exports of the other major classes of U.S. wheat in 1980/81 were somewhat below early expectations.

In mid-May, 1981, the USDA projected 1981/82 season world beginning stocks of wheat at 70.3 million tonnes, versus estimated 1980/81 beginning stocks of 78.6 million tonnes and production at a record-large 463.4 million tonnes, compared with 438.9 million in 1980/81. World utilization of wheat for the 1981/82 season was projected at 446.8 million tonnes and ending stocks at 86.9 million tonnes, which would represent about 19 percent of projected utilization.

1981 Government Program

Provisions of the 1981 wheat program were announced in August, 1980. The major decision was no set-aside program for the 1981 crop. Legislation in December removed the requirements that the 1981 crop be planted within a farmer's normal crop acreage (NCA).

Thus, all wheat farmers are eligible for support loans, the reserve program, target price protection, and disaster program coverage on all acres seeded for harvest.

The August announcement also tentatively pegged the target price and loan rates to at least $3.81 and $3 per bushel, respectively. On March 31, 1981 much of the 1981 wheat program was set in final form. The target price remains at $3.61 per bushel. However, the regular loan rate was raised 20 cents to $3.20 per bushel. The higher loan rate establishes the release price for wheat in Reserve I at $4.48 per bushel and the call price to $5.60. The new release price for wheat in Reserve II is $4.80 per bushel and the call price is $5.92 per bushel. The new release price for wheat in Reserve III is $4.48 per bushel and the call price is $5.60 per bushel. Reserve I reflects grain entered in the reserve program before January 7, 1980. Reserve II covers grain entered January 8 through August 24, 1980, and Reserve III contains grain entered in the reserve after August 24, 1980.

Futures Markets

Wheat futures are traded on the Chicago Board of Trade, the Kansas City Board of Trade, the Minneapolis Grain Exchange, and the MidAmerica Commodity Exchange in Chicago.

World Production of Wheat In Thousands of Metric Tons

Crop Year	Argentina	Australia	Canada	China	France	W. Germany	India	Italy	Pakistan	Spain	Turkey	Un. Kingdom	U.S.S.R.	United States	World Total[1]
1968–9	5,740	14,804	17,685	22,000	14,985	6,012	16,540	9,655	6,477	5,477	8,400	3,469	76,500	42,365	307,185
1969–0	7,020	10,546	18,623	23,000	14,459	5,820	18,652	9,585	6,711	4,624	8,300	3,364	62,300	39,263	287,739
1970–1	4,250	7,890	9,023	24,500	12,922	5,492	20,093	9,689	7,399	4,060	8,000	4,236	82,700	36,783	291,108
1971–2	5,680	8,651	14,412	24,000	15,360	7,142	23,832	10,070	6,476	5,457	10,700	4,815	98,760	44,029	322,562
1972–3	6,800	6,510	14,514	26,000	18,123	6,410	26,410	9,423	6,889	4,562	9,500	4,761	85,993	42,046	331,056
1973–4	6,560	12,094	16,459	28,000	17,792	7,134	24,735	8,900	7,800	3,915	8,000	5,003	109,784	46,407	371,600
1974–5	5,970	11,357	13,295	37,000	19,142	7,761	22,072	9,697	7,800	4,534	8,300	6,130	83,849	48,797	356,410
1975–6	8,570	12,024	17,078	40,000	15,013	7,014	24,104	9,610	7,673	4,302	11,500	4,488	66,224	58,078	350,057
1976–7	11,000	11,700	23,587	50,500	16,150	6,702	28,846	9,528	8,691	4,436	13,000	4,740	96,882	58,500	421,200
1977–8	5,700	9,400	19,900	41,000	17,046	7,126	29,082	6,650	9,100	3,988	13,500	5,267	92,200	55,700	384,200
1978–9	8,100	18,100	21,100	54,000	21,056	8,118	31,700	9,191	8,400	4,795	13,300	6,615	120,800	48,300	446,600
1979–0[2]	8,100	16,100	17,200	62,500	18,695	7,970	35,500	8,800	9,900	4,191	13,000	6,800	90,200	58,100	422,000
1980–1[1]	7,800	11,000	19,100	57,000			31,600		10,800		13,800		98,100	64,500	441,700
1981–2															

[1] Estimated. [2] Preliminary. *Source: Foreign Agricultural Service, U.S.D.A.*

Wheat Supply and Distribution in Canada, Australia and Argentina In Millions of Metric Tons[4]

	Canada (Yr. Beg. Aug. 1)					Australia (Yr. Beg. Dec. 1)					Argentina (Yr. Beg. Dec. 1)				
	Supply			Disappearance		Supply			Disappearance		Supply			Disappearance	
Crop Year	Stocks Aug. 1	New Crop	Total Supply	Domestic	Exports[1]	Stocks Dec. 1	New Crop	Total Supply	Domestic	Exports[1]	Stocks Dec. 1	New Crop	Total Supply	Domestic	Exports[1]
1968–9	666	650	1,316	158	306	52	544	596	92	237	46	211	271	153	90
1969–0	852	684	1,536	180	347	267	388	655	88	297	28	258	286	147	84
1970–1	1,008	332	1,340	171	435	277	290	567	96	336	29	181	210	149	36
1971–2[4]	20.0	14.4	34.4	4.8	13.7	3.7	8.6	12.3	2.9	7.8	.7	5.7	6.4	4.4	1.6
1972–3	15.9	14.5	30.4	4.8	15.7	1.6	6.6	8.2	3.3	4.3	.4	6.9	7.3	4.3	3.2
1973–4	9.9	16.2	26.1	4.6	11.4	.6	12.0	12.6	3.5	7.0	.3	6.6	6.9	4.2	1.6
1974–5	10.1	13.3	23.4	4.6	1.07	2.0	11.4	13.4	3.1	8.6	1.0	6.0	7.0	4.5	1.8
1975–6	8.0	17.1	25.1	4.6	12.3	1.7	12.0	13.7	2.3	8.7	.7	8.6	9.3	5.4	3.2
1976–7	8.2	23.6	31.8	5.0	13.4	2.7	11.7	14.4	2.8	9.5	.7	11.0	11.7	4.2	5.9
1977–8	13.3	19.9	33.2	5.1	16.0	2.1	9.4	11.5	2.2	8.4	1.6	5.7	7.3	4.3	1.8
1978–9	12.1	21.1	33.2	5.3	13.1	.8	18.1	18.9	2.6	11.7	1.2	8.1	9.3	4.1	4.1
1979–0[2]	14.9	17.2	32.1	5.6	15.9	4.6	16.1	20.7	3.1	13.2	1.1	8.1	9.2	4.0	4.8
1980–1[3]	10.6	19.1	29.7	5.6	16.0	4.5	11.0	15.5	2.9	11.1	.4	7.8	8.2	4.0	3.8
1981–2[3]	8.1					1.5					.4				

[1] Including flour. [2] Preliminary. [3] Forecast. [4] Data prior to 1971–72 are in MILLIONS OF BUSHELS.
Source: Foreign Agricultural Service, U.S.D.A.

Seeded Acreage, Yield and Production of All Wheat in the United States

	Seeded Acreage—1,000,000 Acres					Yield Per Harvested Acre—In Bushels					Production—1,000,000 Bushels				
Year	Winter	Spring	Not Durum	Durum	All	Winter	Spring	Not Durum	Durum	All	Winter	Spring	Not Durum	Durum	All
1968	48.7	13.2	9.5	3.7	61.9	29.0	26.4	26.0	27.5	28.4	1,217.6	339.1	239.4	99.6	1,556.6
1969	42.3	11.1	7.6	3.5	53.5	31.2	28.7	27.3	31.7	30.6	1,131.4	311.2	202.8	108.4	1,442.7
1970	37.6	11.1	8.9	2.2	48.7	33.4	23.9	23.6	25.1	31.0	1,091.7	259.8	207.0	52.8	1,351.6
1971	38.1	15.8	12.8	2.9	53.8	35.4	30.9	30.7	32.1	33.9	1,145.0	473.6	381.8	91.8	1,618.6
1972	42.2	12.7	10.1	2.6	54.9	34.0	28.9	29.0	28.6	32.7	1,186.5	359.7	286.8	72.9	1,546.2
1973	43.5	15.8	12.8	3.0	59.3	33.0	28.1	28.3	27.2	31.6	1,278.2	432.6	354.1	78.5	1,710.8
1974	52.0	19.0	14.8	4.2	71.0	29.4	21.9	22.4	19.8	27.3	1,375.5	406.4	325.1	81.2	1,781.9
1975	55.9	18.9	14.1	4.8	74.8	32.0	26.7	26.8	26.4	30.6	1,642.9	484.1	360.7	123.4	2,126.9
1976	57.7	22.5	17.8	4.7	80.4	31.5	27.3	26.8	29.4	30.3	1,564.1	584.6	449.7	134.9	2,148.8
1977	56.3	18.8	15.6	3.2	75.4	31.6	28.0	28.4	26.4	30.7	1,540.4	505.1	425.1	80.0	2,045.5
1978	47.5	18.4	14.3	4.1	66.0	31.8	29.7	30.0	33.1	31.5	1,222.4	553.1	419.8	133.3	1,775.5
1979[1]	51.8	19.6	15.6	4.0	71.4	36.9		28.2	27.1	34.2	1,601.2	532.9	426.2	106.7	2,134.1
1980[2]	57.4	23.0	17.5	5.5	80.4	36.8		25.3	22.4	33.4	1,891.3	478.4	370.0	108.4	2,369.7
1981[2]	63.9	23.1	17.0	6.1	87.1										

[1] Preliminary. [2] Estimate. *Source: Crop Reporting Board, U.S.D.A.*

WHEAT AND FLOUR

Stocks, Production, and Exports of Wheat, by Classes In Millions of Bushels

Year Beginning June[5]	Hard Spring			Durum[3]			Hard Winter			Red Winter			White		
	June 1[6] Stocks	Production	Exports[2]	June 1[6] Stocks	Production	Exports[2]	June 1[6] Stocks	Production	Exports[2]	June 1[6] Stocks	Production	Exports[2]	June 1[6] Stocks	Production	Exports[2]
1968–9	178	228	77	24	100	46	279	811	271	30	224	50	28	214	100
1969–0	210	190	89	41	108	34	475	785	336	33	186	28	58	174	119
1970–1	178	198	113	80	53	39	574	755	450	23	174	26	30	171	110
1971–2	146	366	104	58	92	44	492	747	337	15	212	43	20	201	104
1972–3	275	276	198	69	73	65	471	761	704	18	226	68	30	209	151
1973–4	212	328	245	45	79	45	287	957	775	25	159	27	30	182	125
1974–5	87	293	130	33	81	47	170	883	510	23	273	136	27	252	195
1975–6	104	327	160	26	123	52	225	1,058	581	37	326	165	43	288	215
1976–7	116	411	124	53	135	41	379	976	418	57	336	181	60	284	186
1977–8	250	399	156	92	80	62	606	997	535	72	349	197	93	221	174
1978–9	335	380	232	67	133	72	632	830	610	71	189	95	73	244	185
1979–0[1]	320	363	217	86	106	83	423	1,089	725	27	317	154	68	259	196
1980–1[4]	285	311	185	61	108	65	440	1,185	755	40	428	290	76	338	230
1981–2[4]	244			55			470			23			117		

[1] Preliminary. [2] Includes flour made from U.S. wheat & shipments to territories. [3] Includes "Red Durum." [4] Estimate. [5] Data prior to 1973–4 are for YEAR BEGINNING JULY. [6] Data prior to 1973–4 are as of JULY 1.
Source: Economic Research Service, U.S.D.A.

Salient Statistics of Wheat in the United States

Crop Year	Acreage Harvested — 1,000 Acres			Avg.—All Yield Per Acre In Bushels	Farm Disposition (Million Bushels)			Value of Production Ths. $	Foreign Trade[5] — Million Bushels		Export Value of U.S. Wheat & Pdt's. Mil. $	Per Capita[1] Consumption — In Pounds	
	Winter	Spring	All		Used for Seed	Fed to Livestock	Sold		Domestic Exports[3]	Imports[2]		Flour	Cereal
1968–9	41,929	12,836	54,765	28.4	39.5	59.4	1,458	1,929,131	519.1	1.0	1,306	112	2.9
1969–0	36,303	10,843	47,146	30.6	33.3	58.5	1,351	1,795,738	581.6	2.8	924	112	2.9
1970–1	32,702	10,862	43,564	31.0	35.4	59.9	1,256	1,803,241	693.8	1.5	965	110	2.9
1971–2	32,370	15,315	47,685	33.9	37.3	71.8	1,510	2,167,797	590.2	1.1	1,225	110	2.9
1972–3	34,859	12,444	47,303	32.7	38.0	47.0	1,461	2,706,121	1,127.5	1.3	1,071	109	2.9
1973–4	38,747	15,401	54,148	31.6	48.4	28.1	1,634	6,744,631	1,106.7	2.6	2,387	112	2.9
1974–5	46,778	18,590	65,368	27.3	55.0	32.3	1,695	7,287,192	1,018	3.4	4,738	110	2.9
1975–6	51,307	18,084	69,391	30.6	— 95.3—		2,027	7,534,851	1,173	2.4	5,001	113	2.9
1976–7	49,460	21,311	70,771	30.3	—103.9—		2,038	5,851,443	950	2.7	4,976	118	2.9
1977–8	48,664	17,797	66,461	30.6	—117.3—		1,919	4,742,686	1,124	1.9	3,054	114	2.9
1978–9[4]	38,491	18,004	56,495	31.4	— 84.4—		1,713	5,349,483	1,194	1.9	4,139	114	2.9
1979–0[4]	43,427	19,027	62,454	34.2	— 85.9—		2,056	8,074,141			4,862	116	2.9
1980–1[4]	51,374	19,479	70,853	33.4									
1981–2[4]	57,775												

[1] Civilian only. [2] Includes flour milled from imported wheat. [3] Total wheat, flour & other products. [4] Preliminary. [5] Year beginning June. *Source: Economic Research Service, U.S.D.A.*

Wheat Under Price Support Through the End of the Month (Cumulative Total from Current Season's Crop) In Millions of Bushels

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total
1968–9	127.4	199.2	259.1	317.9	342.5	357.0	397.6	410.9	423.3	437.9	442.7	444.5	453.2
1969–0	124.4	221.3	297.1	336.3	347.0	353.2	384.5	391.1	397.2	402.8	405.8	406.9	411.0
1970–1	126.4	160.3	193.8	213.0	221.0	226.4	240.9	244.3	247.8	251.5	253.7	254.2	254.2
1971–2	77.2	134.3	252.2	318.2	342.5	359.3	408.9	420.1	427.9	434.3	437.4	438.0	438.1
1972–3	59.4	78.3	103.7	121.9	130.3	135.1	140.5	141.8	142.6	142.9	143.0	143.0	143.0
1973–4	32.2	42.2	50.9	55.0	58.1	59.7	59.9	59.9	59.9	59.9	59.9	59.9	59.9
1974–5	14.2	22.2	28.8	31.3	31.8	33.8	35.6	36.1	36.3	36.4	36.4	36.5	36.5
1975–6	12.5	16.4	18.8	23.8	26.4	39.3	45.8	46.8	47.4	47.8	47.8	47.8	47.8
1976–7	8.3	22.0	44.0	82.2	148.1	226.1	278.7	300.7	341.5	363.1	424.7	468.3	468.3
1977–8	186.9	327.2	406.7	438.7	462.8	478.7	509.2	523.6	556.4	572.6	579.5	582.1	582.1
1978–9	53.0	105.7	154.6	183.1	202.5	213.4	237.5	242.8	251.0	254.0	254.3	255.0	255.0
1979–0	6.5	30.1	55.6	82.8	103.3	115.5	138.2	145.4	161.0	176.4	179.4	180.5	180.5
1980–1	35.7	56.6	99.2	126.5	142.2	183.3	228.6	261.0					
1981–2													

Source: Economic Research Service, U.S.D.A.

U.S. Wheat Foreign Trade and Domestic Disappearance In Millions of Bushels

Year Begin. June	Imports (Grain Only)					Exports (Grain Only)					Domestic Disappearance				
	June Sept.	Oct.-Dec.	Jan.-Mar.	Apr.-May	Total	June Sept.	Oct.-Dec.	Jan.-Mar.	Apr.-May	Total	June Sept.	Oct.-Dec.	Jan.-Mar.	Apr.-May	Total
1969–0	.3	1.1	.7	.7	2.8	175.5	149.1	168.1	110.3	603.0	299.1	191.6	168.2	105.0	763.9
1970–1	.7	.2	.3	.3	1.5	222	212	180	128	741	324	167	170	110	772
1971–2	.4	.2	.3	.2	1.0	216	130	147	117	610	352	196	190	111	849
1972–3	.4	.3	.4	.2	1.3	289	288	310	248	1,135	370	184	162	82	798
1973–4	.5	.3	.3	1.5	2.6	526	341	232	119	1,217	331	183	149	91	754
1974–5	2.1	.6	.4	.2	3.3	330	283	255	150	1,019	232	172	191	78	672
1975–6	.7	.7	.3	.6	2.4	428	344	247	154	1,173	245	156	202	119	722
1976–7	.9	.4	.3	1.1	2.7	399	220	179	152	950	226	187	214	127	754
1977–8	.8	.4	.4	.3	1.9	382	225	279	238	1,124	373	183	189	114	859
1978–9[1]	.6	.5	.5	.3	1.9	493	309	225	168	1,194	327	195	177	138	837
1979–0[1]	.7	.5	.5	.4	2.1	511	388	283	194	1,375	277	167	209	130	783
1980–1[1]	.7	.6				518	371				282	199			
1981–2															

[1] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

Wheat Stocks in the United States In Millions of Bushels

Year	On Farms				Off Farms				Total Stocks			
	Jan. 1	Apr. 1	June 1[2]	Oct. 1	Jan. 1	Apr. 1	June 1[2]	Oct. 1	Jan. 1	Apr. 1	June 1[2]	Oct. 1
1968	505.2	361.0	229.5	727.8	704.5	477.1	309.0	951.5	1,209.7	838.1	538.5	1,679.3
1969	576.9	460.5	325.9	752.2	764.4	649.0	490.8	1,120.2	1,341.4	1,109.5	816.7	1,872.4
1970	609.4	456.5	307.1	663.7	923.4	740.7	577.8	1,124.8	1,532.8	1,197.2	884.9	1,788.5
1971	526.1	381.1	240.3	826.9	883.9	679.4	491.2	1,046.9	1,410.0	1,060.4	731.5	1,873.8
1972	694.5	525.7	355.1	730.2	853.1	685.0	508.2	1,140.7	1,547.6	1,210.7	863.3	1,870.9
1973	510.2	316.1	133.9	608.5	888.8	611.3	304.6	843.1	1,399.0	927.3	438.5	1,451.6
1974	364.4	181.7	89.5	680.5	564.0	366.4	158.2	881.7	928.3	548.1	247.7	1,562.1
1975	446.3	274.1	132.7	755.5	661.2	388.0	194.3	1,129.0	1,107.5	662.1	327.0	1,884.5
1976	547.6	342.6	235.5	833.3	838.0	594.2	429.8	1,354.9	1,385.7	936.8	665.3	2,188.2
1977	665.4	511.0	426.3	1,035.1	1,116.4	878.5	685.9	1,365.3	1,781.8	1,389.5	1,112.2	2,400.4
1978	831.3	639.9	492.9	1,033.7	1,162.5	887.8	683.8	1,104.2	1,993.8	1,527.7	1,176.7	2,137.9
1979	814.4	633.3	484.3	1,030.1	816.4	596.2	439.8	1,240.7	1,630.8	1,229.4	924.1	2,270.8
1980[1]	773.9	569.6	376.5	975.3	942.2	655.5	525.5	1,496.6	1,716.2	1,225.1	902.0	2,471.9
1981[1]	754.1	542.5			1,147.9	790.6			1,903.8	1,333.2		
1982												

[1] Preliminary. [2] Data prior to 1976 are *as of July 1.* *Source: Crop Reporting Board, U.S.D.A.*

United States Wheat and Wheat Flour Imports and Exports In Thousands of Bushels

Year Beginning June	Imports					Exports						
	Wheat					Public Law 480						
	Suitable for Milling	Unfit for Human Consumption	Flour (Wheat Equivalent)	Other Pdt's.[2] (Wheat Equivalent)	Total	Sales for Foreign Currency[3]	Long-Term $ & Conver. for Cur. Credit Sales	Gov't. to Gov't. Donations[4]	Donations Thru Voluntary Relief Agencies	Barter for Strategic Materials	Mutual Security (A.I.D.)[5]	Total Specified Gov't. Programs
1968–69	—	484	91	471	1,046	82,558	111,940	36,151	9,951	—	1,515	242,115
1969–70	794	1,417	55	567	2,833	69,447	154,697	33,668	11,430	—	—	269,242
1970–71	397	265	90	723	1,475	46,970	143,267	30,477	11,381	—	966	233,061
1971–72	101	82	89	781	1,053	22,686	153,382	37,858	13,006	—	754	227,686
1972–73	29	52	90	1,131	1,302	—	90,576	35,954	12,603	—	−86	139,047
1973–74	1,262	70	178	1,113	2,623	—	26,355	10,891	8,502	—	11,074	56,822
1974–75	1,734	109	387	1,134	3,364	—	102,269	6,705	7,873	—	—	116,847
1975–76	631	344	92	1,307	2,374	—	105,861	2,734	7,046	—	8,348	123,989
1976–77	1,298	20	32	1,381	2,731	—	133,504	8,887	17,842	—	15,836	158,277
1977–78	424	2	20	1,475	1,921	—	127,137	6,851	12,983	—	13,808	160,779
1978–79[1]	18	15	45	1,772	1,850	—	129,283	6,714	11,174	—	118	147,289
1979–80[1]					2,100							

[1] Preliminary. [2] Includes macaroni, semolina & similar pdt's. [3] Authorized by title I, P.L. 480. [4] Author. by title II, P.L. 480. [5] Foreign Assist. Act of 1961. *Source: Economic Research Service, U.S.D.A.*

WHEAT AND FLOUR

Comparative Average Cash Wheat Prices In Dollars per Bushel

Crop Year—June to May[3]	Received by U.S. Farmers	No. 2 Soft Red Winter Chicago	No. 1 Hard Red Ordin. Prot. Kansas City	No. 2 Soft Red Winter St. Louis	No. 1 Soft Red Winter Baltimore	No. 1 Dark Northern Spring Minneapolis	No. 2 Hard Amber Durum Minneapolis	No. 1 Soft Portland Oregon	No. 2 Western White Portland	No. 2 White Soft Toledo	Export Prices ($ per Metric Ton) Gulf No. 1 H.R. Winter Ports	Export Prices ($ per Metric Ton) Portland No. 2 White West. Duluth
1972–3	1.76	2.23	2.33	2.24		2.21	2.17	2.47	2.44	2.28		
1973–4	3.95	4.93	4.62	4.61	4.58	4.73	6.76	4.81	5.09	4.80	4.85	
1974–5	4.09	4.09	4.13	4.03	4.29	4.96	6.44	4.37	4.55	3.89	4.46	5.05
1975–6[3]	3.56	3.54	3.74	3.46	3.71	3.74	5.16	3.88	3.95	3.36	4.05	4.47
1976–7	2.73	2.81	2.88	2.78	2.91	2.96	3.30	3.10	3.16	2.75	115	116
1977–8	2.33	2.56	2.72	2.54	2.80	2.66	3.37	3.09	3.15	2.48	110	116
1978–9	2.97	3.57	3.38	3.43		3.17	3.66	3.73	3.80	3.54	135	140
1979–0[1]	3.78	4.24	4.25	4.10		4.16	5.09	4.22		4.06	171	161

[1] Preliminary. [2] Estimate. [3] Data prior to 1975–6 are for crop year July to June. *Source: Economic Research Service, U.S.D.A.*

Production of Winter Wheat in the United States In Millions of Bushels

Year	Colorado	Idaho	Illinois	Indiana	Kansas	Michigan	Missouri	Montana	Nebraska	Ohio	Oklahoma	Oregon	Pa.	Texas	Wash.	Total U.S.
1971	59.1	37.8	46.0	31.9	312.6	17.8	31.0	54.8	102.2	41.5	72.0	32.0	9.4	31.4	108.3	1,145.0
1972	51.6	34.7	54.0	39.6	314.9	21.4	36.1	48.3	92.8	46.3	89.7	35.2	8.6	44.0	119.5	1,186.5
1973	63.2	32.8	39.0	24.6	384.8	19.9	25.5	55.1	93.8	25.6	157.8	33.6	7.4	98.6	74.2	1,278.2
1974	71.9	39.8	51.9	46.9	319.0	34.0	38.0	78.2	98.6	59.5	134.4	47.3	11.5	52.8	110.4	1,375.5
1975	55.6	36.1	67.5	61.6	350.9	34.2	48.5	105.0	98.2	70.6	160.8	54.1	10.1	131.1	137.0	1,642.9
1976	51.6	39.2	72.2	54.0	339.0	33.1	58.1	98.6	94.4	64.0	151.2	56.1	9.0	103.4	132.7	1,564.1
1977	56.1	32.4	67.5	55.8	344.9	33.0	68.6	81.2	103.3	72.4	175.5	45.2	8.9	117.5	95.2	1,540.4
1978	57.3	41.8	33.4	28.9	300.0	16.4	28.6	83.7	81.6	42.1	145.8	47.3	7.1	54.0	117.0	1,222.4
1979	67.6	35.7	53.8	44.4	410.4	31.6	70.4	57.4	86.7	63.4	216.6	48.0	7.3	138.0	94.6	1,601.2
1980[1]	107.2	51.9	75.4	53.9	420.0	35.2	89.0	54.8	112.1	67.1	195.0	72.0	9.3	130.0	143.0	1,891.3

[1] Preliminary, December estimate. *Source: Crop Reporting Board, U.S.D.A.*

Production of All Spring Wheat in the United States In Millions of Bushels

	Durum Wheat						Other Spring Wheat									
Year	Arizona	Minnesota	Montana	North Dakota	South Dakota	Total Durum	Colorado	Idaho	Minnesota	Montana	North Dakota	Oregon	South Dakota	Utah	Washington	Total U.S.
1971		1.9	3.7	82.1	3.8	91.8	.6	12.1	56.8	53.5	207.7	2.5	41.8	.9	5.0	381.8
1972		1.0	4.2	65.5	2.1	72.9	.4	9.5	47.5	46.3	149.1	1.7	27.0	.7	3.8	286.8
1973		2.1	4.0	69.6	2.7	78.5	.5	15.6	74.9	37.6	169.7	2.4	36.1	1.4	15.0	354.1
1974		2.4	5.1	70.8	2.9	81.2	.7	22.1	77.4	36.9	136.5	5.4	29.9	1.7	13.2	325.1
1975		2.8	10.1	104.9	4.4	123.4	.7	24.0	83.7	40.8	156.3	4.0	35.1	1.5	10.9	360.7
1976	23.9	2.7	8.6	90.5	1.6	134.9	1.6	29.2	123.5	60.2	193.6	4.2	20.5	1.3	11.3	449.7
1977	6.1	2.8	4.8	60.5	3.3	80.0	1.1	18.4	125.6	44.9	167.0	2.4	51.7	.6	6.1	425.1
1978	6.4	3.8	8.7	102.1	3.8	133.3	2.0	33.6	87.8	53.7	180.1	4.6	44.0	1.4	11.2	419.8
1979	5.3	2.8	6.8	84.5	3.6	106.7	2.6	38.4	85.8	52.3	165.1	9.3	46.0	1.6	23.4	426.2
1980	12.4	3.4	7.6	73.2	4.1	108.4	2.7	44.2	96.9	57.4	105.5	5.4	37.4	1.4	17.2	370.0

[1] Preliminary, December estimate. *Source: Crop Reporting Board, U.S.D.A.*

United States Official Winter Wheat Crop Production Reports In Thousands of Bushels

Crop Year	Previous December	April 1	May 1	June 1	July 1	August 1	Sept. 1	Current December	Final
1972	1,291,428	—	1,149,064	1,192,478	1,195,199	1,196,353	1,198,103	1,227,848	1,186,498
1973	1,277,848	—	1,281,999	1,315,672	1,319,702	1,293,053	1,291,463	1,269,653	1,278,220
1974–5	1,513,462	—	1,612,106	1,531,355	1,402,445	1,393,460	1,390,800	1,391,303	1,375,526
1975–6	1,599,527	—	1,619,776	1,618,598	1,636,524	1,634,227	1,650,037	1,651,209	1,642,900
1976–7	1,495,869	—	1,458,996	—	1,530,124	1,542,660	1,542,330	1,566,074	1,564,118
1977–8	1,438,015	—	1,477,455	—	1,539,029	1,526,029	1,528,844	1,526,713	1,540,419
1978–9	1,321,068	—	1,284,375	—	1,801,705	1,248,405	1,243,685	1,248,272	1,222,446
1979–0	1,441,306	—	1,390,848	—	1,560,768	1,602,901	1,595,591	1,608,897	1,601,234
1980–1	1,567,817	—	1,711,010	1,757,170	2,317,068	2,324,951	2,353,641	1,891,251	
1981–2	1,977,079	—	2,078,137	—					

Source: Crop Reporting Board, U.S.D.A.

Supply and Distribution of Wheat in the United States In Millions of Bushels

Crop Yr. Beginning June	Supply							Domestic Disappearance							Total Disappearance
	Stocks, June 1				Production	Imports[4]	Total Supply	Food	Seed	Industry	Feed		Total Dom. Disap.	Exports[4]	
	On Farms	Mills, Elevators[3]	C.C.C.	Total Stocks							Residual[5]	(On Farms Where Grown)			
1968–9	229.5	308.3	.7	630.2	1,556.6	1.0	2,188	522.4	60.9	.1	156.3	(60.8)	739.7	544.2	1,284
1969–0	325.9	490.0	.8	904.0	1,442.7	2.8	2,350	520.1	55.6	.5	187.7	(61.0)	763.9	603.0	1,367
1970–1	307.1	576.6	1.2	982.6	1,351.5	1.5	2,336	517.2	62.1	.1	192.6	(62.0)	772.0	740.8	1,513
1971–2	240.3	489.4	1.8	822.8	1,618.6	1.1	2,442	523.7	63.2	.1	262.3	(71.7)	849.3	609.7	1,459
1972–3	355.1	506.3	1.8	983.4	1,546.2	1.3	2,531	531.8	67.4	.1	199.5	(47.0)	798.8	1,135.0	1,934
1973–4	133.9	302.8	1.8	597.1	1,710.8	2.6	2,311	544.3	84.1	—	125.1	(31.5)	753.5	1,217.0	1,971
1974–5	89.5	157.9	.3	340.1	1,781.9	3.4	2,125	545.0	92.0	—	34.9		671.9	1,018.5	1,690
1975–6	132.7	194.3	—	435.0	2,126.9	2.4	2,564	588.6	99.0	.1	38.1		725.8	1,172.9	1,859
1976–7	235.5	429.8	—	665.6	2,148.8	2.7	2,817	588.0	92.0	.1	74.3		754.4	949.5	1,704
1977–8	426.3	685.9	—	1,113.2	2,045.5	1.9	3,161	586.5	80.0	.1	192.4		859.0	1,123.9	1,983
1978–9	492.9	683.8	—	1,176.7	1,775.5	1.9	2,955	591.8	87.0	.1	158.1		837.0	1,194.1	2,031
1979–0[1]	484.3	439.8	—	924.1	2,134.1	2.1	3,060	595.3	101.0	—	86.7		783.1	1,375.2	2,158
1980–1[2]	376.5	525.5	—	902.0	2,370.2		3,274	605.0	110.0	—	125.0		840.0	1,525.0	2,365
1981–2															

[1] Preliminary. [2] Estimated. [3] Also warehouses and all off-farm storage not otherwise designated, including flour mills. [4] Imports & exports are for wheat, including flour & other products in terms of wheat. [5] Approximate feed use. *Source: Economic Research Service, U.S.D.A.*

Exports of Wheat (Only) from the United States In Millions of Bushels

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total
1968–9	48.0	46.5	25.2	37.9	44.0	60.3	13.9	15.1	37.4	48.8	51.2	39.5	467.8
1969–0	41.8	32.4	32.9	40.5	38.4	48.1	51.7	51.4	44.6	54.4	43.4	48.3	527.9
1970–1	47.9	56.3	49.9	69.0	60.3	61.6	59.3	46.7	59.9	50.7	66.7	43.4	671.7
1971–2	47.4	38.3	59.4	31.7	39.5	45.2	36.5	45.6	49.8	47.3	59.6	66.9	567.2
1972–3	58.8	68.1	69.0	82.6	83.5	107.3	101.9	92.9	98.7	108.3	128.8	126.1	1,127.0
1973–4	115.2	149.1	131.6	122.1	120.5	89.5	83.1	72.8	63.9	55.7	55.0	56.9	1,115.4
1974–5	82.8	91.6	86.0	91.3	98.3	82.3	108.4	71.3	65.2	77.0	65.3	77.2	996.7
1975–6	99.7	111.2	125.5	123.6	117.8	92.3	91.6	72.4	76.4	76.8	67.8	66.7	1,121.8
1976–7	85.4	113.0	109.9	98.7	53.3	56.9	49.0	57.7	50.7	68.1	66.4	75.6	884.7
1977–8	82.8	93.4	108.5	68.3	56.7	86.7	64.6	94.5	103.3	101.8	118.8	108.8	1,088.2
1978–9	106.1	131.9	118.3	113.0	92.3	90.0	70.4	67.1	75.5	77.0	76.8	102.2	1,120.6
1979–0	133.3	117.8	129.6	149.0	108.9	114.9	82.7	89.5	94.7	98.3	88.6	96.2	1,305.5
1980–1	123.6	139.6	136.0	116.2	112.2	131.9	129.9						
1981–2													

Source: Department of Commerce

Average Price of No. 1 Hard Winter (Ordinary Protein) Wheat, at Kansas City In Cents per Bushel

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Average
1968–9	137	135	134	140	142	140	141	140	140	139	139	135	138
1969–0	128	131	139	143	146	146	146	146	145	147	144	140	142
1970–1	138	147	159	158	159	159	158	158	155	156	161	163	156
1971–2	154	154	153	156	156	158	158	157	158	161	162	152	157
1972–3	158	182	210	215	225	262	267	248	242	251	263	269	233
1973–4	290	467	501	467	478	522	568	582	501	407	359	405	462
1974–5	436	433	435	494	488	466	415	393	369	366	334	323	413
1975–6	361	412	421	409	371	350	357	381	381	361	357	375	374
1976–7	363	321	301	277	262	264	270	273	263	252	236	231	288
1977–8	235	231	247	256	281	280	282	284	307	321	312	312	272
1978–9	314	314	324	342	348	339	342	350	352	353	364	417	338
1979–0	434	412	426	439	453	451	433	432	407	390	410	407	425
1980–1	421	431	445	470	489	454	460	447	435				
1981–2													

Source: Agricultural Marketing Service, U.S.D.A.

WHEAT AND FLOUR

United States Wheat Quarterly Supply and Disappearance In Millions of Bushels

	Supply				Disappearance							Ending Stocks		
					Domestic Use									
Year & Begin. June 1	Beginning Stocks	Production	Imports[2]	Total Stocks	Food	Alc. Beverages	Seed	Feed[3]	Total	Exports[2]	Total Disappearance	Gov't. Owned[4]	Privately Owned[5]	Total Stocks
1975–6	435	2,123	2.4	2,560	587.5	.1	99.0	35.1	721.7	1,173	1,895	—	665.3	665.3
June–Sept.	435	2,123	.7	2.558	195.0	[6]	33.0	17.2	245.2	428.4	673.6	—	1,885	1,885
Oct.–Dec.	1,885	—	.7	1,885	149.9	[6]	35.0	–28.8	156.1	343.6	499.6	—	1,386	1,386
Jan.–Mar.	1,386	—	.3	1,386	148.5	[6]	1.0	52.4	201.9	247.3	449.2	—	936.8	936.8
Apr.–May	937	—	.6	937	94.2	[6]	30.0	–5.7	118.5	153.7	272.1	—	665.3	665.3
1976–7	666	2,149	2.7	2,817	588.0	.1	92.0	74.3	754.4	949.5	1,704	—	1,113	1,113
June–Sept.	665	2,149	.9	2,815	200.4	[6]	32.0	–6.3	226.1	398.8	624.9	—	2,190	2,190
Oct.–Dec.	2,190	—	.4	2,191	152.5	[6]	34.0	.4	186.9	220.3	407.2	—	1,784	1,784
Jan.–Mar.	1,784	—	.3	1,784	147.3	[6]	1.0	65.9	214.2	178.8	393.0	—	1,391	1,391
Apr.–May	1,391	—	1.1	1,392	87.8	[6]	25.0	14.3	127.2	151.6	278.8	—	1,113	1,113
1977–8	1,113	2,046	1.9	3,161	586.5	.1	80.0	192.4	859.0	1,124	1,983	45.7	1,132	1,178
June–Sept.	1,113	2,046	.8	3,160	193.3	[6]	32.0	148.1	373.4	381.7	775.1	8.2	2,396	2,405
Oct.–Dec.	2,405	—	.4	2,405	153.5	[6]	23.0	6.0	182.5	225.4	407.9	31.8	1,965	1,997
Jan.–Mar.	1,997	—	.4	1,997	145.5	[6]	1.0	42.4	188.9	278.6	467.5	44.8	1,485	1,530
Apr.–May	1,530	—	.3	1,530	94.2	[6]	24.0	–4.1	114.2	238.2	352.4	45.7	1,132	1,178
1978–9	1,178	1,776	1.9	2,955	591.8	.1	87.0	158.1	837.0	1,194	2,031	50.2	873.9	924.1
June–Sept.	1,178	1,776	.6	2,954	191.7	[6]	27.0	108.0	326.7	493.3	820.0	48.9	2,085	2,134
Oct.–Dec.	2,134	—	.5	2,134	153.8	[6]	34.0	7.0	194.8	308.8	503.6	49.5	1,581	1,631
Jan.–Mar.	1,631	—	.5	1,631	147.4	[6]	1.0	29.0	177.4	224.5	401.9	49.5	1,180	1,229
Apr.–May	1,229	—	.3	1,230	98.9	.1	25.0	14.1	138.1	167.5	305.6	50.2	873.9	924.1
1979–0[1]	924.1	2,134	2.1	3,060	595.3	—	101.0	86.7	783.1	1,375	2,158	141.7	760.3	902.0
June–Sept.	824.1	2,134	.7	3,059	198.0	[6]	33.0	46.1	277.1	511.0	788.1	49.9	2,221	2,271
Oct.–Dec.	2,271	—	.5	2,271	157.6	[6]	37.0	–27.4	167.2	387.9	555.1	49.6	1,667	1,716
Jan.–Mar.	1,716	—	.5	1,717	145.1	[6]	1.0	62.0	208.9	282.7	491.6	63.3	1,162	1,225
Apr.–May	1,225		.4	1,226	04.6	.1	30.0	5.2	129.9	193.6	323.5	141.7	760.3	902.0
1980–1[2]	902.0	2,370	.2	3,274	605.0	—	110.0	125.0	840.0	1,525	2,365			909.0
June–Sep.	902.0	2,370	.7	3,272	197.2	[6]	35.0	49.9	282.1	518.4	800.5	202.1	2,270	2,472
Oct.–Dec.	2,472		.6	2,473	155.9	[6]	43.0	.2	199.1	371.4	570.5	202.9	1,699	1,902
Jan.–Mar.														
Apr.–May														

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[1] Preliminary. [2] Imports & exports include flour and other products expressed in wheat equivalent. [3] Residual. [4] Uncommitted, Gov't. only. [5] Includes total loans. [6] Less than 50,000 bushels. [7] Projected.
Source: Economics Research Service, U.S.D.A.

Wheat Government Loan Program Data in the United States Loan Rates (Cents Per Bushel)

											Total Stocks Ending May 31					
													Privately Owned			
													Under Loan			
Crop Year Beginning June	Total Support Rate	National Avg.[1]	Average Extra Payment	No. 1 Dk. No. Spring Minneapolis	No. 1 Hard Red Winter Kansas City	No. 1 Soft White Portland	Placed Under Loan	Direct Purchases	Total	Delivered to CCC	Ending Carry-over	CCC Uncommitted	Current Crop	Previous	Sealed Under Bond	Other
							Millions of Bushels									
1968–9	183	125	55	156	144	144	445.0	8.2	453.2	177.7	904.0	141.9	168.6	325.0	6	262.5
1969–0	194	125	65	157	145	145	406.9	.7	407.6	95.7	982.6	279.0	95.9	381.0	5	221.7
1970–1	200	125	75	159	147	146	254.2	—	254.2	5.2	822.8	352.6	47.6	191.7	8	222.9
1971–2	179	125	54	162	149	147	438.1	22.5	460.6	35.1	983.4	355.1	180.6	198.6	13	236.1
1972–3	172	125	47	163	150	148	143.0	24.1	167.1	24.1	597.1	6.3	23.9	101.8	11	454.1
1973–4	146	125	21	131	124	125	59.9	—	59.9	—	340.1	.6	.4	.1	—	339.0
1974–5	205	137	68	139	139	141	36.5	.8	37.3	0	435.0	—	4.3	—	—	430.7
1975–6[2]	205	137		138	138	142	47.8	3.7	51.5	0	665.3	—	21.4	—	—	665.3
1976–7[2]	229	225		227	225	232	498.8			48.0	1,113					1,113.2
1977–8[2]	247	225		226	219	231	590.8			2.2	1,178					1,132.1
1978–9[2]	340	235		234	228	241	255.1			—	924.1					873.9
1979–0[2]	340	250		248	243	257	179.4			—	902.0					760.3
1980–1[2]	368	300		300	294	308	183.0			203.0	909.0					
1981–2																

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[1] The national average loan rate at the farm as a percentage of the parity priced wheat at the beginning of the marketing year. [2] Preliminary. *Source: Agricultural Marketing Service, U.S.D.A.*

Average Price of No. 1 Dark Northern Spring Wheat at Minneapolis (14%[1] Protein) In Cents per Bushel

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Average
1968–9	168	168	178	185	181	177	184	182	184	181	182	179	179
1969–0	182	173	179	180	183	184	184	184	183	189	190	192	184
1970–1	190	187	192	196	197	190	190	187	182	183	182	180	188
1971–2	173	166	172	177	172	172	174	169	170	173	176	170	172
1972–3	174	196	209	214	222	242	242	229	233	239	257	280	228
1973–4	307	450	480	450	448	498	552	583	533	441	423	507	473
1974–5	536	507	520	563	562	538	480	449	453	456	443	430	494
1975–6	469	490	512	503	474	446	454	470	466	448	465	475	469
1976–7	444	379	356	341	330	314	313	315	313	309	291	271	348
1977–8[1]	254	248	275	287	296	292	294	290	303	323	327	321	288
1978–9	311	313	326	341	347	332	330	336	342	345	373	432	335
1979–0	442	419	429	445	429	417	407	408	402	396	431	433	421
1980–1	469	455	456	482	495	477	481	478	467				
1981–2													

[1] Prior to 1977–8, prices are for 15% protein. *Source: Agricultural Marketing Service, U.S.D.A.*

Average Price[1] Received by Farmers for Wheat in the U.S. In Cents per Bushel

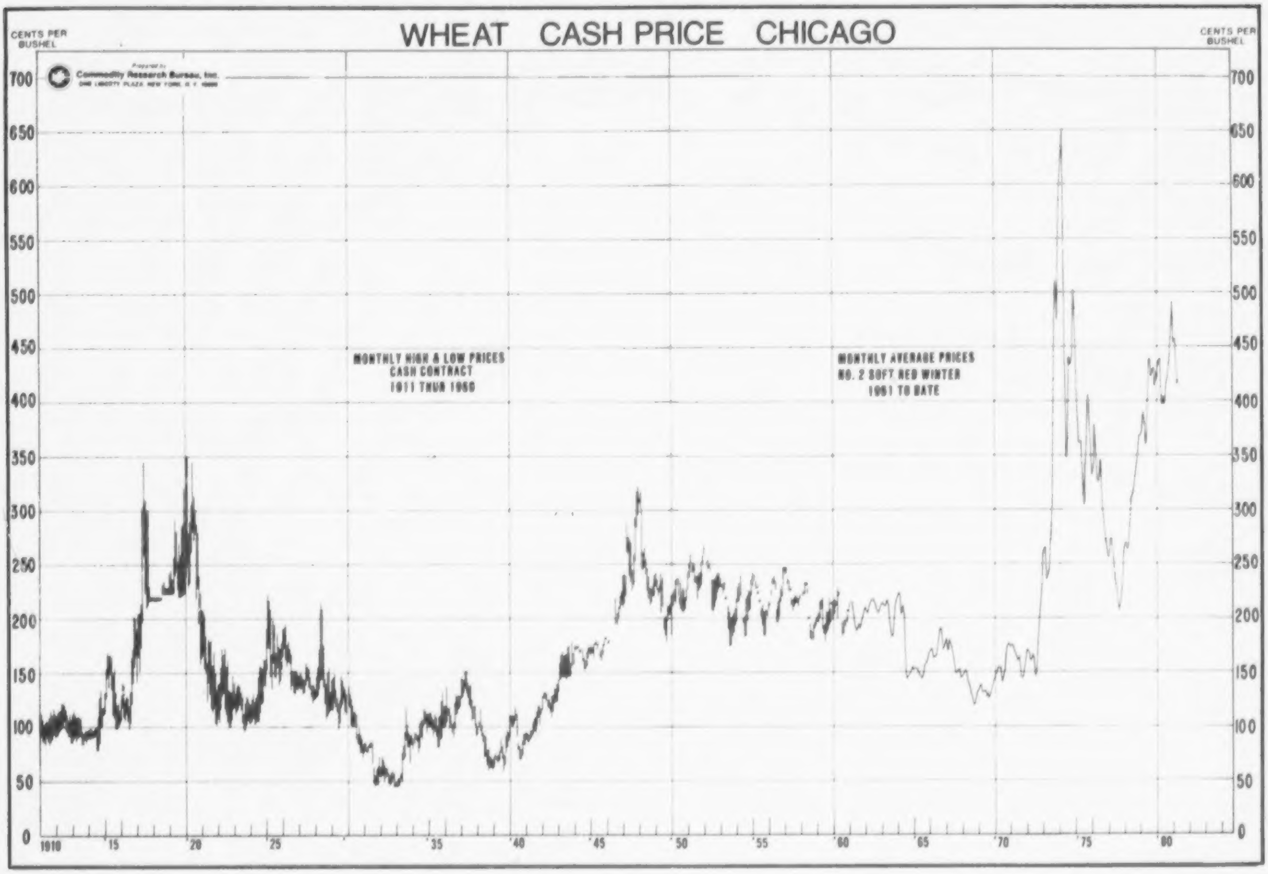
Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Average[2]
1968–9	119	119	122	126	129	126	127	128	128	128	128	122	124
1969–0	115	119	124	128	129	130	129	130	128	132	131	123	124
1970–1	123	131	141	143	145	141	140	141	139	140	143	146	133
1971–2	134	128	126	130	131	134	133	134	134	136	138	133	131
1972–3	132	151	173	189	197	238	238	197	206	215	215	243	176
1973–4	247	445	462	422	420	478	529	552	496	398	352	357	396
1974–5	404	424	432	485	487	465	411	395	365	369	347	292	404
1975–6	333	389	411	402	358	341	343	366	365	350	343	346	355
1976–7	333	297	288	259	246	239	243	247	243	237	219	203	273
1977–8	204	213	216	230	246	247	253	259	267	282	282	281	233
1978–9	281	288	292	299	304	301	299	299	297	301	320	372	298
1979–0	389	374	387	398	394	381	374	378	364	358	369	369	382
1980–1	381	394	399	419	432	422	421	417	409	399			
1981–2													

[1] Weighted average by sales. [2] Includes an allowance for unredeemed loans at average loan values.
Source: Statistical Reporting Service, U.S.D.A.

United States Grindings of Wheat by Mills In Millions of Bushels (of 60 Pounds Each)

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total
1968–9	45.9	49.0	48.0	53.6	49.5	47.7	45.9	42.0	46.1	45.6	47.6	46.5	567.4
1969–0	44.1	48.0	49.5	51.9	49.3	51.3	48.9	47.4	47.4	45.8	44.5	44.1	572.2
1970–1	44.7	47.4	49.4	51.7	46.2	46.1	46.4	44.0	46.7	43.5	45.0	46.7	557.8
1971–2	45.2	49.4	49.3	48.2	44.5	46.3	45.9	44.5	46.9	43.8	46.9	47.2	558.1
1972–3	44.2	47.5	47.7	50.1	46.8	46.4	47.5	44.5	46.8	42.8	45.8	43.8	553.9
1973–4	44.7	48.9	48.1	49.3	46.3	46.9	48.9	45.0	46.1	41.4	42.2	41.6	549.4
1974–5	42.2	45.6	47.0	51.5	47.0	44.3	43.9	39.7	42.8	46.4	45.7	44.4	540.5
1975–6	47.4	49.0	51.2	54.1	45.2	46.0	47.2	44.7	48.8	47.2	46.8	47.6	575.2
1976–7	49.3	54.6	52.2	51.2	47.5	46.9	48.0	48.0	54.4	46.4	46.9	46.3	591.7
1977–8[1]	43.5	51.7	49.3	49.4	53.2	52.1	48.4	48.9	54.8	50.5	53.6	51.5	606.9
1978–9[1]	49.7	56.1	50.5	55.3	52.9	48.9	50.9	48.2	52.5	50.2	55.1	50.3	620.6
1979–0[1]	59.0	58.9	52.4	58.9	55.7	50.6	55.0	50.4	49.1	47.2	49.8	47.8	634.8
1980–1[1]	51.8	53.0	54.8	58.4	54.6	56.8	58.0						
1981–2													

[1] Preliminary. *Source: Bureau of the Census*



Average Price of No. 2 Soft Red Winter Wheat at Chicago In Dollars per Bushel

Year	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Average
1968–9	1.30	1.28	1.22	1.20	1.25	1.32	1.33	1.38	1.36	1.32	1.32	1.33	1.30
1969–0	1.28	1.30	1.27	1.31	1.36	1.41	1.48	1.49	1.55	1.53	1.55	1.48	1.43
1970–1	1.41	1.45	1.52	1.67	1.74	1.77	1.74	1.75	1.74	1.70	1.67	1.61	1.67
1971–2	1.64	1.54	1.45	1.45	1.53	1.60	1.71	1.69	1.61	1.62	1.66	1.63	1.58
1972–3	1.46	1.53	1.76	2.02	2.11	2.28	2.60	2.65	2.47	2.37	2.45	2.71	2.31
1973–4	2.82	3.08	4.75	5.11	4.75	5.47	5.84	6.30	6.50	5.59	4.33	3.48	4.93
1974–5	3.91	4.40	4.34	4.41	5.03	4.86	4.69	4.02	3.84	3.62	3.63	3.25	4.09
1975–6	3.03	3.42	3.82	4.06	3.84	3.49	3.32	3.45	3.78	3.66	3.34	3.30	3.54
1976–7	3.47	3.37	3.01	2.89	2.72	2.60	2.66	2.73	2.74	2.63	2.53	2.35	2.81
1977–8	2.29	2.20	2.08	2.20	2.27	2.59	2.65	2.69	2.64	2.82	3.11	3.14	2.56
1978–9	3.18	3.22	3.32	3.42	3.51	3.68	3.68	3.73	3.88	3.79	3.60	3.86	3.57
1979–0	4.36	4.39	4.23	4.28	4.30	4.13	4.26	4.36	4.39	4.18	3.96	4.04	4.24
1980–1	3.96	4.17	4.21	4.38	4.70	4.92	4.54	4.57	4.34	4.15			
1981–2													

Source: Agricultural Marketing Service, Grain Division, U.S.D.A.

Commercial Stocks of Domestic Wheat[1] in the United States, at First of Month In Millions of Bushels

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1968–9	132.8	205.6	217.9	220.6	215.1	186.3	170.4	168.8	169.7	157.9	142.4	138.4
1969–0	170.0	261.5	284.3	293.4	279.8	263.5	246.7	229.6	218.8	200.1	178.5	174.8
1970–1	215.0	205.6	289.0	302.6	302.6	285.6	253.0	241.8	215.9	184.8	176.1	151.4
1971–2	159.9	195.1	209.6	223.5	211.9	205.0	194.8	179.9	170.3	218.8	181.3	175.2
1972–3	206.5	268.1	324.2	372.3	356.0	323.1	297.2	267.7	241.2	212.9	174.2	124.1
1973–4	149.8	196.9	215.2	208.2	185.1	158.8	146.6	141.4	128.4	117.2	97.6	85.4
1974–5	162.9	253.1	217.4	267.5	276.3	256.6	217.8	179.3	149.5	126.6	105.3	83.0
1975–6	172.5	313.9	380.2	415.8	398.0	338.1	274.7	238.8	220.1	209.0	179.6	168.7
1976–7	291.9	420.3	461.6	504.9	477.5	432.3	416.5	388.2	370.0	350.4	332.7	320.6
1977–8	383.9	469.3	526.5	509.0	488.0	460.2	418.6	385.4	355.8	321.5	281.9	240.5
1978–9	250.9	305.6	319.9	318.9	272.0	246.9	223.1	199.1	181.1	166.6	144.7	131.0
1979–0	197.0	326.8	360.0	371.4	338.2	302.9	274.5	259.0	253.4	228.1	200.3	184.2
1980–1	283.9	432.6	502.4	505.9	490.5	458.1	412.2	347.9	299.4	243.4	194.9	
1981–2												

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[1] Domestic wheat in store in public and private elevators in 39 markets and wheat afloat in vessels or barges at lake and seaboard ports, the first Saturday of the month. *Source: Department of Agriculture*

Commercial Stocks of Canadian Wheat[1] in Canada, at First of Month In Thousands of Metric Tons[2]

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1968–9	426.8	417.7	403.7	389.5	400.0	420.1	421.8	403.5	396.2	403.4	412.2	402.5
1969–0	425.1	474.7	474.4	469.3	453.7	435.3	426.7	417.6	417.8	418.4	401.6	394.4
1970–1	401.8	437.2	402.8	411.9	379.5	364.4	371.1	359.7	353.8	347.2	330.5	310.0
1971–2	334.4	304.6	311.2	316.4	312.1	296.0	306.6	302.5	290.8	275.7	265.2	255.0
1972–3	287.2	276.2	290.4	277.4	293.8	292.6	291.5	285.7	264.2	218.7	214.0	178.1
1973–4	172.8	205.1	192.3	208.2	213.3	198.7	185.6	177.9	194.0	197.7	181.5	171.6
1974–5	211.0	241.9	217.1	222.4	203.9	204.0	202.8	199.3	192.0	198.3	167.7	151.9
1975–6	163.3	190.7	183.0	207.2	219.6	220.8	217.2	209.9	203.1	187.3	178.0	151.5
1976–7	153.6	183.5	185.6	222.8	223.9	244.2	253.0	236.7	233.7	220.5	208.5	189.8
1977–8[2]	4,905	4,985	5,477	6,263	6,358	5.948	5,645	5,108	5,159	5,194	4,987	4,711
1978–9	5,612	6,251	6,045	5,596	5,131	5,034	5,113	4,799	4,799	4,894	4,637	4,147
1979–0	4,810	5,149	5,581	5,990	5,992	5,754	6,172	6,069	5.731	5,260	4,620	4,539
1980–1	4,210	5,659	4,963	4,997	5,137	5,338	5,292	5,234	5,288	5,130		
1981–2												

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[1] Canadian wheat in Canada exclusive of farm stocks, first Wednesday of month. [2] Data prior to July 1977 are in millions of bushels. *Source: Board of Grain Commissioners of Canada*

Open Interest of All Wheat Futures Contracts at Chicago,[1] K.C. & Mpls. In Millions of Bushels

Year	End of Month[1]												Kansas City[3]		Minn.[2]
	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan. 1	July 1	Jan. 1
1968	173.9	143.0	121.9	103.1	110.7	135.1	189.5	202.9	218.7	227.4	215.7	208.9	48.1	51.5	7.6
1969	182.9	144.0	119.6	104.6	97.3	95.1	118.0	121.6	122.1	114.5	101.6	99.0	36.4	28.9	9.7
1970	91.7	93.5	81.2	76.9	66.5	69.5	93.1	90.4	96.8	98.0	88.6	85.5	34.0	34.3	8.8
1971	86.0	74.6	62.1	61.3	58.7	73.1	80.6	81.1	81.6	79.6	83.9	66.3	32.5	28.7	6.8
1972	61.8	66.2	53.1	52.6	50.3	60.0	77.6	100.1	98.6	109.2	112.3	95.2	21.2	26.9	5.9
1973	115.3	114.5	107.1	125.8	119.8	110.0	92.9	90.3	98.2	108.2	114.5	134.4	77.8	46.1	32.4
1974	154.1	161.5	154.8	144.8	136.9	136.4	147.4	147.5	153.0	164.5	150.6	150.0	53.2	48.0	30.3
1975	149.3	149.9	137.4	143.0	133.8	139.7	188.6	199.7	224.7	222.5	199.9	181.4	55.1	61.0	31.7
1976	165.8	206.7	202.9	171.2	183.5	226.4	237.2	227.2	233.8	270.2	260.5	229.4	102.5	120.6	27.4
1977	220.0	238.0	203.0	196.6	183.0	200.1	207.6	208.1	240.9	248.2	236.9	245.1	107.4	81.6	27.4
1978	229.4	200.7	180.6	164.9	193.2	163.1	190.0	240.9	255.9	241.7	240.4	186.4	102.7	84.8	25.9
1979	195.0	195.1	173.5	187.2	176.0	250.2	258.6	302.6	319.7	284.1	287.5	286.9	84.7	120.1	35.3
1980	279.5	266.6	222.5	214.2	213.5	270.0	345.4	345.7	376.3	442.9	420.1	350.5	121.0	92.0	31.5
1981	291.1	236.5	211.7	209.8									142.6		23.7
1982															

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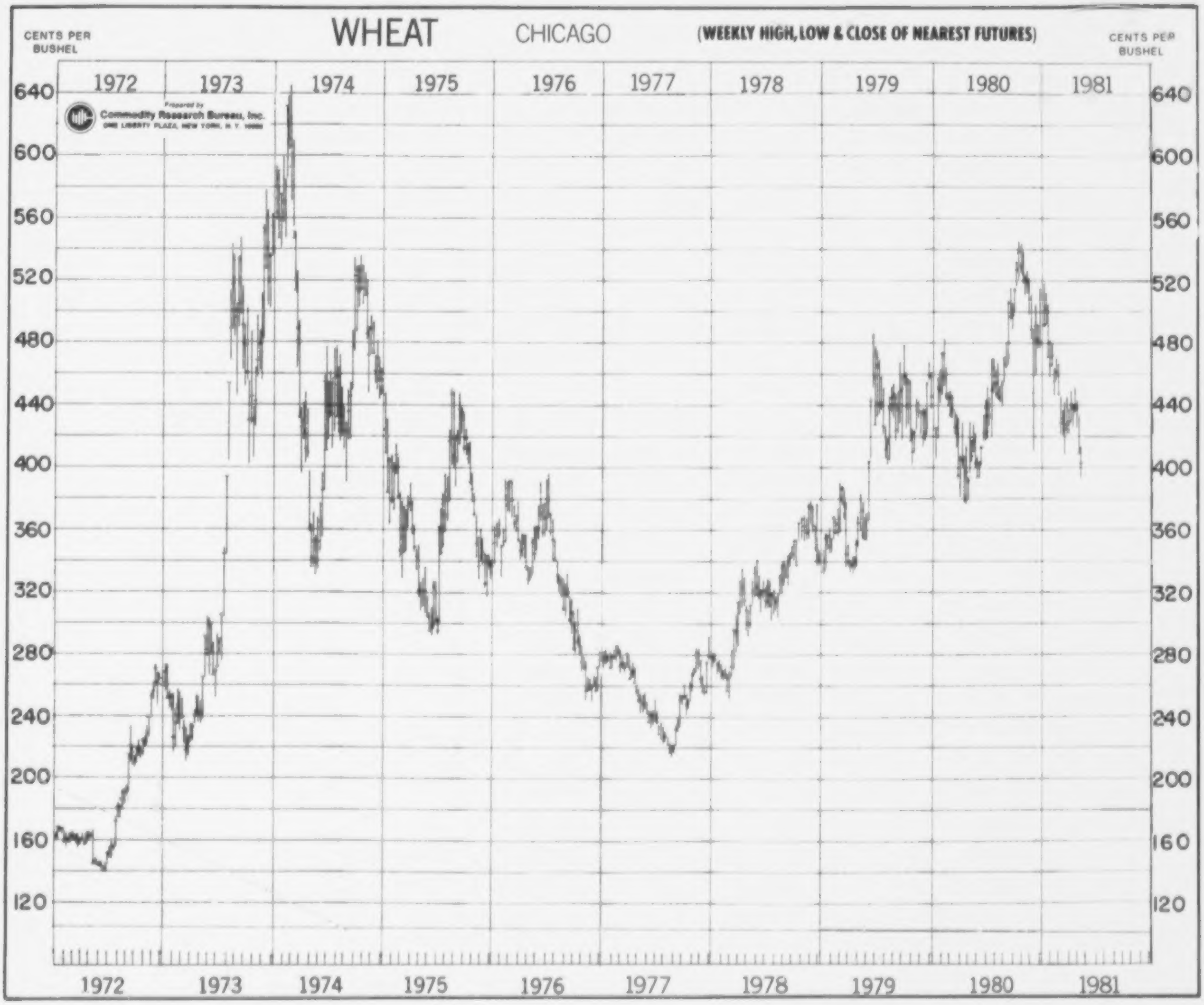
[1] Chicago Board of Trade. [2] Minneapolis Grain Exchange. [3] Kansas City Board of Trade.
Source: Commodity Futures Trading Commission



Volume of Trading in Wheat Futures at Chicago Board of Trade In Millions of Bushels

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total
1968–9	813.3	859.5	742.3	724.0	623.4	500.0	420.6	417.0	464.2	471.4	447.2	447.3	6,930.2
1969–0	571.9	471.1	365.8	282.6	233.2	271.0	200.0	299.1	221.2	238.9	256.1	302.9	3,714
1970–1	458.3	534.0	491.1	377.4	343.0	293.3	230.2	247.6	230.7	338.2	267.1	424.1	4,235
1971–2	421.1	371.0	328.9	330.4	322.3	338.7	273.3	244.2	233.0	242.1	197.2	233.1	3,535
1972–3	516.7	1,065	981.7	809.6	774.7	835.4	767.3	810.6	782.5	725.5	927.6	765.1	9,764
1973–4[1]	898.0	758.8	1,018	1,087	1,131	1,130	1,153[1]	970.6	1,137	922.4	864.0	1,026	12,096
1974–5	1,285	1,049	907	1,154	810	653	902	731	768	637	682	858	10,436
1975–6	1,520	1,313	1,062	1,159	960	721	848	1,399	1,472	1,288	1,121	1,758	14,621
1976–7	1,796	1,228	1,876	1,180	1,005	601	577	810	888	693	597	846	12,097
1977–8	824	623	777	740	982	747	694	713	1,130	1,179	1,063	1,122	10,594
1978–9	1,133	1,312	1,034	1,260	1,272	878	889	843	805	660	1,092	1,878	13,056
1979–0	1,932	1,806	1,642	2,714	1,858	1,551	2,064	2,216	1,897	2,091	2,054	2,011	23,836
1980–1	3,336	1,949	2,551	2,720	2,190	2,060	1,855	1,509					
1981–2													

[1] Data prior to Jan. 1973 are for AT ALL "CONTRACT" MARKETS IN THE U.S.

Source: Commodity Futures Trading Commission; Chicago Board of Trade

High, Low & Closing Prices of May Wheat Futures on the Chicago Board of Trade In Cents per Bushel

Year of Delivery		Year Prior to Delivery									Delivery Year					Life of Delivery
		Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April	May	Range
1978	High	316	295	282½	274¼	252½	270¾	277½	297	293	287¾	276	314¼	335	326	335
	Low	294½	271½	263¼	245¼	238¾	241½	258	272½	267	272	259¼	261¼	296	291½	238¾
	Close	294½	275½	274¼	248¾	242¼	267¾	274	280	284¾	272¾	260¾	313½	309	325¾	—
1979	High	349	351	341½	337	327¼	335¼	355½	356	356	340	355½	361	354½	382½	382½
	Low	316	310½	316	30[illegible]	297½	320	329¼	334½	328¾	323	328	335½	332	352½	297½
	Close	322	342½	320¼	314¾	323	332¾	351¼	354¾	333½	331¼	353¼	339¾	353¾	358¾	—
1980	High	371	398	514	486	475	481	500	469½	474¾	474	491	458½	429	428½	514
	Low	344½	366½	390	406½	411	430½	436	433	443	415¾	447	383	376½	383	344½
	Close	368½	390¾	451	415	464½	474¼	450¾	462¼	462¼	473½	447¼	383½	385½	414	—
1981	High	477	490	482½	503½	506	541½	570½	563½	553½	526	487	451	451		
	Low	440½	451	444	462½	482½	502	517	541¼	445½	465	455	418½	426		
	Close	450	453½	470	500¾	502¼	531	554¼	553¼	510¼	471¼	457½	433¾	433¾		
1982	High	526														
	Low	500														
	Close	506														

Source: Chicago Board of Trade

Wheat and Flour—Price Relationships at Milling Centers (In Dollars)

	At Kansas City					At Minneapolis				
		Wholesale Price of					Wholesale Price of			
				Total Products					Total Products	
Crop Year (June-May[5])	Cost of Wheat to Produce 100 lb. Flour[1]	Bakery Flour Per 100 lb.[2]	By-Products Obtained 100 lb. Flour[3]	Actual	Over Cost of Wheat	Cost of Wheat to Produce 100 lb. Flour[1]	Bakery Flour Per 100 lb.[2]	By-Products Obtained 100 lb. Flour[3]	Actual	Over Cost of Wheat
1968–9	5.29	5.40	.72	6.12	.83	5.57	5.87	.71	6.58	1.01
1969–0	5.47	5.51	.74	6.25	.78	5.74	6.03	.73	6.76	1.02
1970–1	5.58	5.58	.86	6.44	.86	5.92	6.27	.85	7.12	1.20
1971–2	5.43	5.34	.74	6.08	.65	5.48	5.99	.71	6.70	1.22
1972–3	7.13	6.78	1.11	7.89	.76	6.85	7.12	1.07	8.19	1.34
1973–4[5]	10.58	10.36	1.60	11.96	1.38	10.48	10.67	1.56	12.23	1.75
1974–5	10.43	10.07	1.61	11.68	1.25	11.04	11.28	1.58	12.86	1.82
1975–6	9.43	9.23	1.56	10.79	1.36	10.04	10.39	1.51	11.90	1.86
1976–7	7.06	7.02	1.66	8.68	1.62	7.46	8.12	1.70	9.82	2.36
1977–8	6.56	6.76	1.26	8.02	1.46	6.73	7.49	1.20	8.69	1.96
1978–9	7.85	7.89	1.47	9.36	1.51	7.76	8.22	1.34	9.56	1.80
1979–0	9.85	10.02	1.70	11.72	1.87	9.73	10.26	1.51	11.77	2.04
June–Sept. '80	9.81	10.11	1.81	11.92	2.11	10.46	10.83	1.63	12.46	2.00
Oct.–Dec. '80[4]	10.80	10.54	2.38	12.92	2.12	11.29	11.04	2.05	13.09	1.80
Jan.–Mar. '81										
Apr.–Mar. '81										
June–Sept. '81										

[1] Cost of 2.28 bushels. [2] Quoted as 95% patent at K.C. & standard patent at Minn., bulk basis. [3] Assumes 50–50 millfeed distribution between bran & shorts or middlings, bulk basis. [4] Preliminary. [5] Data prior to 1973–4 are for July–June crop year. *Source: Agricultural Marketing Service, U.S.D.A.*

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WHEAT AND FLOUR

World Wheat Flour Production In Thousands of Metric Tons

Year	Argentina	Australia[2]	Canada	Spain	India[3]	Mexico	Israel	Japan	W. Germany	Egypt	Poland	South Africa	United Kingdom	United States	Yugoslavia
1968	2,208	1,284	1,716	3,276	1,368	1,188	313	3,360	2,328	N.A.		658	3,684	11,532	2,016
1969	2,184	1,248	1,740	3,228	1,740	1,236	323	3,384	2,364	N.A.		671	3,744	11,520	2,076
1970	2,352	1,284	1,812	3,192	2,220	1,332	329	3,396	2,412	N.A.		728	3,756	11,508	2,172
1971	2,388	1,308	1,776	2,976	2,520	1,382	360	3,468	3,436	1,920		715	3,780	11,352	2,280
1972	2,424	1,200	1,788	3,060	2,832	1,488	372	3,588	2,316	2,172		756	3,696	11,364	2,268
1973	2,304	1,092	1,728	2,904	1,932	1,560	420	3,576	2,376	2,340		806	3,768	11,304	2,292
1974	2,388	1,140	1,692	2,808	1,752	1,608	396	3,732	2,364	2,592	2,220	917	3,756	10,980	2,388
1975	2,484	1,260	1,788	3,000	1,680	1,584	456	3,996	3,060	2,736	2,292	919	3,888	11,208	2,316
1976	2,532	1,236	1,932	2,952	1,788	1,714	444	4,008	3,252	2,880	2,460	950	3,948	11,772	2,424
1977	2,616	1,176	1,872	2,976	2,136	1,680	468	3,960	3,264	3,240	2,256	908	3,900	11,856	2,388
1978	2,592	1,092	1,992	3,000	2,016	1,752	492	4,044	3,336	3,480	2,328	725	3,852	12,612	2,388
1979[1]	2,556	1,080	2,100	3,100	1,518	1,920	480	4,176	3,456	3,492	2,436	675	3,780	12,876	2,400
1980[4]	2,500	1,120			2,200	2,100	500	4,201	3,600	3,300			3,700	12,500	2,600
1981															

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[1] Preliminary. [2] Twelve months ending June 30 of the year stated. [3] Represents 60 percent of the total production. [4] Estimate. *Source: United Nations*

Supply and Distribution of Wheat Flour in the United States In Thousands of Cwt.

Year	Wheat Ground 1,000 Bu.	Millfeed Production 1,000 Tons	Flour Production[1]	Flour and Product Imports[2]	Total Supply	Exports		Domestic Disappearance	Total Population July 1 Millions	Per Capita Disappearance Pounds
			1,000 Cwt.			Flour	Products[2]			
1968	569,649	4,511	254,310	233	254,543	28,068	133	226,342	200.6	113
1969	567,956	4,458	254,194	274	254,468	26,333	158	227,977	202.6	113
1970	563,714	4,409	253,094	325	253,419	26,054	144	227,221	204.8	111
1971	555,092	4,279	249,810	341	250,151	20,685	152	229,314	207.0	111
1972	557,801	4,303	250,441	477	250,918	20,335	194	230,389	208.8	110
1973	567,287	4,395	254,661	550	255,211	16,107	265	238,839	210.4	114
1974	562,962	4,483	251,097	665	251,762	14,453	335	236,974	211.9	112
1975	582,675	4,701	258,985	621	259,606	12,364	219	247,023	213.5	116
1976	618,284	4,920	275,077	604	275,681	16,064	439	259,178	215.1	120
1977	618,125	4,880	275,784	604	276,388	22,053	372	253,963	216.8	117
1978	621,321	4,861	277,905	773	278,678	22,170	431	256,077	218.5	117
1979[3]	634,954	4,932	283,905	823	284,728	20,927	109	263,692	219.6	120
1980-										

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[1] Commercial production of wheat flour, whole wheat, industrial and durum flour and farina reported by Bureau of Census. Production prior to 1970 includes estimate for non-commercial wheat milled. [2] Imports and exports of macaroni products (flour equivalent). [3] Preliminary. *Source: Economics & Statistics Service, U.S.D.A.*

United States Wheat Flour Production In Millions of Sacks (of 100 Pounds Each)

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total
1968–9	20.4	21.9	21.5	23.5	22.1	21.3	20.3	19.0	20.6	20.3	21.2	20.8	252.8
1969–0	19.6	21.5	22.2	23.4	22.2	23.1	22.0	21.0	21.3	20.8	19.8	20.0	256.9
1970–1	20.0	21.2	22.2	23.4	20.7	20.8	20.9	19.8	21.0	19.7	20.2	21.0	250.9
1971–2	20.2	22.2	22.1	21.7	20.1	21.0	20.7	20.0	21.1	19.7	21.1	21.1	251.0
1972–3	19.8	21.3	21.3	22.5	21.1	20.8	21.3	20.0	21.1	19.3	20.6	19.8	248.9
1973–4	20.1	21.9	21.6	22.0	20.7	21.0	22.1	20.1	20.8	18.5	18.9	18.6	246.3
1974–5	18.7	20.3	20.8	22.8	20.9	19.7	19.5	17.7	19.1	20.6	20.4	19.6	240.1
1975–6	21.2	21.7	22.7	24.1	20.1	20.5	21.0	19.9	21.8	21.1	20.9	21.1	256.1
1976–7	21.8	24.3	23.2	22.7	21.0	20.8	21.3	21.4	24.3	20.6	20.9	20.5	262.8
1977–8[1]	19.4	23.0	22.0	22.1	23.8	23.4	21.8	21.7	24.3	22.6	24.1	23.1	271.3
1978–9[1]	22.3	25.1	22.4	24.8	23.7	21.9	22.8	21.5	23.5	22.3	24.6	22.5	277.4
1979–0[1]	23.5	26.3	23.3	26.1	24.8	22.7	24.6	22.6	22.2	21.2	22.8	21.4	281.5
1980–1[1]	23.1	24.0	24.8	26.3	24.4	25.2	26.1						
1981–2													

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[1] Preliminary. *Source: Bureau of the Census*

Stocks of Wheat Flour Held by Mills in the United States In Thousands of Sacks (100 Pounds)

Year	Jan. 1	April 1	July 1	Oct. 1	Year	Jan. 1	April 1	July 1	Oct. 1
1968	4,372	4,348	4,262	4,517	1975	4,499	4,755	4,434	4,140
1969	4,638	4,489	4,324	4,391	1976	3,907	4,510	3,923	3,621
1970	4,595	4,237	4,227	4,438	1977[1]	4,334	4,248	4,167	3,537
1971	4,329	4,732	4,586	4,861	1978[1]	4,160	4,096	3,459	3,342
1972	4,362	4,542	4,379	4,886	1979[1]	3,214	3,477	3,895	3,813
1973	4,746	5,581	5,393	4,174	1980[1]	3,975	3,323	4,268	3,716
1974	5,505	5,297	3,748	3,885	1981[1]	3,842			

[1] Preliminary. *Source: Department of Commerce*

United States Wheat Flour Exports In Thousands of 100 Pound Sacks

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total
1969–0	2,249	919	1,534	2,752	2,052	1,499	2,232	1,726	1,860	2,238	1,837	2,523	23,601
1970–1	863	1,164	1,074	2,438	1,537	2,104	1,134	1,528	1,188	1,282	1,536	2,841	18,689
1971–2	1,627	1,374	1,178	982	908	1,060	1,318	1,472	1,169	757	2,300	2,494	16,639
1972–3	1,381	930	965	1,049	1,665	1,049	1,553	611	1,626	1,134	977	993	13,933
1973–4	1,352	1,596	1,607	483	612	912	914	1,015	904	832	957	858	12,042
1974–5	784	797	699	816	929	1,058	820	715	577	516	1,718	1,119	10,548
1975–6	1,084	999	753	735	588	555	423	379	525	1,149	1,789	2,184	11,163
1976–7	1,294	2,083	2,449	997	447	188	1,218	2,334	2,519	3,272	1,857	1,248	12,483
1977–8[1]	1,194	1,146	730	473	766	1,237	723	147	1,774	2,554	2,297	2,694	15,735
1978–9[1]	1,674	2,145	1,963	1,505	357	486	382	1,165	1,163	752	2,689	1,727	16,008
1979–0[1]	1,669	2,489	2,218	1,223	842	1,971	1,018	1,300	2,713	867	918	1,606	18,833
1980–1[1]	894	2,137	1,396	1,034	522	609	980						

[1] Preliminary. *Source: Department of Commerce*

Average Wholesale Price of Wheat Flour (Winter, Hard—95% Patent) at Kansas City —$ Per Cwt.

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Average
1969–0	5.59	5.49	5.41	5.49	5.48	5.49	5.51	5.54	5.53	5.51	5.51	5.51	5.51
1970–1	5.53	5.53	5.71	5.71	5.65	5.59	5.59	5.61	5.50	5.49	5.50	5.59	5.58
1971–2	5.48	5.31	5.28	5.33	5.34	5.35	5.34	5.34	5.31	5.34	5.34	5.34	5.34
1972–3	5.463	6.163	6.363	6.413	6.500	7.500	7.375	6.813	6.875	7.163	7.038	7.738	6.78
1973–4	7.538	9.388	10.463	9.863	10.113	11.075	12.913	13.150	12.488	9.738	9.188	9.688	10.47
1974–5	10.725	10.150	10.325	11.363	11.775	11.200	10.438	9.938	9.125	8.975	8.550	8.088	10.050
1975–6	8.938	9.363	10.213	10.113	9.650	8.988	8.963	9.350	9.563	9.063	8.713	8.838	10.160
1976–7	—	8.075	7.613	7.375	6.938	6.838	6.763	6.813	6.525	6.200	5.838	5.575	6.778
1977–8	5.850	5.913	6.088	6.325	6.575	6.488	6.988	6.675	6.963	8.250	7.463	7.225	6.734
1978–9	7.600	7.575	7.550	7.600	7.925	7.788	7.550	7.775	8.175	8.125	8.800	9.075	7.962
1979–0	10.388	10.088	10.075	10.100	10.600	10.463	10.000	10.263	9.813	9.488	10.013	9.838	10.094
1980–1	10.000	10.113	10.475	10.600	10.675	—	10.663	10.400					

Source: Bureau of Labor Statistics (0212–0102.01)

Average Wholesale Price of Wheat Flour (Spring[1]), at Minneapolis In Dollars per Hundred Pounds (Bulk)

Year	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Average
1969–0	6.01	6.03	5.91	5.95	5.99	6.00	6.00	6.06	6.09	6.10	6.08	6.11	6.03
1970–1	6.13	6.13	6.28	6.41	6.41	6.36	6.35	6.31	6.25	6.24	6.23	6.20	6.28
1971–2	6.11	6.06	5.98	6.00	6.01	6.00	6.00	5.99	5.91	5.91	5.93	5.95	5.99
1972–3	6.025	6.525	6.888	6.850	6.938	7.625	7.613	7.138	7.263	7.325	7.313	7.875	7.11
1973–4	7.738	10.280	10.600	9.913	10.225	11.525	12.975	13.313	12.700	10.188	9.838	10.963	10.85
1974–5	12.013	11.513	11.425	12.600	12.938	12.175	11.488	11.025	10.388	10.363	9.863	9.550	11.28
1975–6	10.213	10.513	11.238	11.163	10.675	10.150	10.150	10.213	10.713	10.250	10.075	10.350	10.48
1976–7	10.288	9.438	8.500	8.375	7.913	7.838	7.750	7.863	7.725	7.125	6.925	6.500	8.015
1977–8	6.588	6.688	7.025	7.188	7.338	7.200	7.588	7.325	7.650	8.638	8.388	8.100	7.476
1978–9	8.250	7.938	7.825	7.900	8.400	8.138	7.813	8.038	8.313	8.300	9.013	9.288	8.268
1979–0	10.638	10.513	10.463	10.563	10.713	10.438	10.088	10.413	10.113	9.688	10.375	10.338	10.362
1980–1	11.025	10.963	10.975	11.113	11.138	—	11.050	11.113					

[1] Standard patent. *Source: Bureau of Labor Statistics* (0212–0103)

Wool

Production of 56 million pounds of raw wool in 1981 was expected, or about 3 percent more than last year. Imports of dutiable and duty-free raw wool were expected to rise about 3 percent over last year, to 58 million pounds. Mill consumption was estimated at about 125 million pounds, 2 percent more than in 1980. Carpet wool use totaled 9.1 million pounds in 1980, continuing its decline of recent years. Apparel wool consumption in 1980 was 114 million pounds, 17 percent above the average of the past six years. The worsted system used 57.4 million pounds, 15 percent more than last year. This increase reflected the strong demand for suiting fabric which uses the finer fibers. Part of this demand resulted from professional women buying more fine wool apparel. In contrast, the woolen system consumed 57 million pounds, 0.4 percent below 1979, reflecting the depressed domestic demand in the second and third quarters.

The U.S. sheep population on January 1, 1981, was estimated at 12.9 million, 2 percent more than a year earlier and the largest since the 1976 total of 13.3 million.

There were divergent price trends for domestic and foreign wool in late 1980. Stronger demand by foreign wool mills and the drought were factors responsible for the rise in Australian prices and reduced quality of finer wools. These factors have resulted in a smaller supply of the finer wools being available. In contrast, the domestic wool market was characterized by slow demand. Continued high interest rates discouraged inventory accumulation by mills. The rather limited wool supply was in strong hands who were not finding the prices they desired. The average price received by farmers rose from 90 cents a pound last summer to a high of 95 cents in October when the sale of finer grades dominated the market. Wool prices were expected to rise 5–10 percent in spring, 1981.

Raw wool imports in 1980 totaled 56 million pounds, 28 percent above the average of the last 6 years.

About 304 thousand pounds of raw wool were exported in 1980, slightly below the previous year.

The World Wool Situation

World wool production in the 1980/81 season was expected to total 3.5 billion pounds, clean, 0.5 percent above last season and 4 percent above the average of the past four seasons. An important factor limiting this increase from the last year was the drought in Australia, which cut the clip 4 percent. Several inter-related factors affecting clip size resulted from the prolonged drought, poor pasture growth, insufficient nutrition, smaller fleece yield, higher farm deaths, heavy marketings, etc. Australian sheep flocks were forecast to be 130 million head, down 4 percent from a year earlier.

In contrast, New Zealand was expected to have a wool clip 5 percent greater than last year because of abundant pasture growth. Uruguay had good weather, which indicated their wool production could increase 7 percent. Sheep numbers in China were increasing despite bad weather in some areas. Their 1980 clip was expected to be 8 percent greater than last year.

In summary, the 1980 wool clip was expected to contain less of the finer wools because of the lower Australian clip and more of the coarser types from New Zealand and China.

Worldwide stocks of wool at the beginning of the 1980/81 season were 214 million pounds, compared to 207 million last year. This season's available supply is 3.70 billion pounds, 0.7 percent more than last season and 0.4 percent more than the average of the last four seasons. About one-third of this supply was the fine merino-wools, down 2.3 percent from 1979/80 because of the Australian drought. The increase in supply, up 2 percent or 2.49 million pounds, is confined to the coarser wools because of the larger supplies from New Zealand and China.

Global wool textile mill activity declined in the second quarter of 1980 and continued downward in the third quarter.

U.S. Government Price Support

The 1981 support price for shorn wool was set by the USDA's Agricultural Stabilization and Conservation Service (ASCS) at $1.35 per pound. The 1981 support price is up 12 cents from the 1980 support price. Pulled wool will continue to be supported at a level comparable to the support price for shorn wool through payments on unshorn lambs.

As in past years, shorn wool payments will be based on a percentage of each producer's returns from sales. The percentage will be that required to raise the national average price received by all producers for shorn wool in 1981 up to the support price of $1.35 a pound.

Estimated World "Supply" Stocks of Raw Wool (Clean Basis) In Millions of Pounds

At Beginning of Season[1]	Australia (Carry-over)	Australian Wool Corp.	New Zealand (Carry-over)	New Zealand Wool Board	South African (Carry-over)	South African Wool Board	Argentina	Uruguay	British Wool Mkt. Board	Total Supply Stocks	Production During Season	Total Available Supplies
1973–4	22.0	.4	22.0	—	2.2	—	114.6	—	4.4	445.3	3,187.9	3,633.2
1974–5	50.7	33.1	19.8	4.4	8.4	4.4	92.6	4.4	4.4	379.2	3,185.6	3,564.8
1975–6	33.1	302.0	13.2	52.9	2.2	28.7						
1976–7	28.7	255.7	13.2	11.0	2.2	15.4	30.9	4.4	4.4	85.9	3,157.0	3,242.9
1977–8[2]	24.3	209.4	8.8	24.3	2.2	8.8	88.2	19.8	4.4	233.6	3,331.2	3,564.8
1978–9							116.8	4.4	4.4	557.7	3,330.0	3,887.7

[1] At July 1 for all except Argentina & Uruguay which are Oct. 1. [2] Preliminary.

Source: U.S. Dept. of Agriculture (compiled from reports of the Commonwealth Secretariat.)

Estimated World Production of Raw Wool In Millions of Pounds

Crop Year	Argentina	Australia	New Zealand	South Africa	United Kingdom	United States	Uruguay	Other	Total Free World	Soviet Bloc	World Total	Of Which			
												Merino	Crossbred	Total Apparel	Other
1973–4	397	1,545	628	231	108	159	132	931	4,131	1,343	5,474	2,059	2,094	4,154	1,320
1974–5	406	1,750	648	236	110	143	137	931	4,361	1,413	5,774	2,233	2,191	4,425	1,349
1975–6	414	1,662	688	238	108	130	137	959	4,336	1,431	5,767	2,171	2,227	4,398	1,369
1976–7	388	1,550	668	227	106	117	139	967	4,162	1,367	5,529	2,052	2,121	4,173	1,356
1977–8[1]	386	1,499	688	231	101	112	128	967	4,112	1,415	5,527	2,024	2,138	4,162	1,365
1978–9															

[1] Preliminary. *Source: U.S. Dept. Agriculture (compiled from reports of the Commonwealth Secretariat.)*

World Production of Wool[3] In Thousands of Metric Tons[4] (Greasy Basis)

Year	Brazil	Argentina	Australia	China	France	Morocco	India	N. Zealand	Spain	Turkey	South Africa	Un. Kingdom	United States	Uruguay	U.S.S.R.	World[1] Total
1968	88.9	436.8	1,948	181.5	45.1	33.1	81.6	731.7	76.1	104.7	334.6	119.0	212.4	176.4	915.1	6,295
1969	82.5	443.3	2,036	185.1	44.9	37.5	77.2	723.1	73.7	105.8	340.6	119.0	194.7	165.3	859.1	6,261
1970[4]	40.6	199.8	885.4	86.4	20.3	15.5	36.0	333.9	33.8	47.5	126.8	47.2	85.0	80.0	418.9	2,663
1971	34.4	188.8	880.4	88.6	21.0	13.5	37.0	322.3	32.1	47.5	121.2	44.5	81.9	62.0	428.8	2,606
1972	37.1	177.0	735.2	90.3	21.2	20.0	30.8	308.8	31.7	50.3	114.7	46.7	79.6	61.0	420.0	2,413
1973	36.5	179.2	700.9		21.4	23.0	30.1	284.8	31.8	47.3	113.3	49.4	72.0	53.0	433.0	2,355
1974	34.4	183.4	793.5		21.7	19.0	30.5	294.1	34.0	52.4	114.6	49.9	64.7	55.0	461.0	2,495
1975	31.3	190.2	757.4		21.9	20.0	31.0	311.8	29.0	53.0	114.3	50.3	58.6	60.0	463.0	2,481
1976	30.3	176.3	702.7	61.0	22.0	21.0	32.0	302.5	28.6	53.9	110.5	49.9	53.8	60.4	432.0	2,457
1977	26.9	172.0	677.4	61.0	22.4	20.0	33.1	310.8	28.0	54.1	113.4	48.0	49.9	62.2	455.0	2,465
1978[2]	28.0	170.8	695.4	61.0	23.3	21.0	34.2	316.5	27.5	54.5	110.9	50.1	46.4	62.7	458.0	2,497
1979[1]	29.0	170.0	710.0	61.0	23.5	21.5	34.5	320.0	28.0	54.5	110.9	53.6	45.9	63.0	460.0	2,529
1980																

[1] Estimated. [2] Preliminary. [3] Includes shorn, pulled, & wool exported on skins. [4] Data prior to 1970 are in MILLIONS OF POUNDS. *Source: Foreign Agricultural Service, U.S.D.A.*

World Consumption of Wool In Millions of Pounds (Clean Basis)

Year	Argentina	Australia	Belgium	Canada	France	W. Germany	Italy	Japan	Netherlands	New Zealand	South Africa	United Kingdom	United States[3]	Uruguay	Soviet Bloc	World Total
1968	48	73	88	17	239	149	211	371	18	15	28	391	330	50		3,453
1969	55	77	93	14	268	166	236	395	19	19	31	385	313	46		3,325
1970	60	81	89	11	275	150	204	403	18	24	27	337	240	48		3,308
1971	74	77	67	10	318	163	195	402	19	28	26	311	191	45		3,263
1972	80	75	68		322	170	227	400	19			336	219			3,480
1973	67	62	51		259	119	202	411	14			301	151		1,037	3,180
1974	71	47	45		231	85	189	258	12			248	93		1,102	2,861
1975	70	48	54		236	120	196	294	12			244	110		1,099	3,032
1976[1]	71	61	70		276	145	262	346	14			264	122		1,070	3,293
1977[2]	81	57	68		259	134	251	291				250	108		1,116	3,176
1978[2]													115			
1979[2]													117			
1980[2]													123			

[1] Preliminary. [2] Estimate. [3] Consumption on woolen & worsted systems only.
Sources: Bureau of the Census; Commonwealth Economic Committee

WOOL

Wool Goods[1] Production in the United States In Millions of Linear Yards

Year	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total Year	Year	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total Year
1968	62.0	68.8	56.7	55.7	243.3	1975	17.3	19.4	20.4	21.7	78.9
1969	65.6	63.0	48.1	45.7	222.5	1976	26.0	26.4	22.9	21.9	97.3
1970	58.1	54.2	35.4	30.9	178.6	1977[2]	26.2	26.7	23.3	25.4	101.6
1971	37.0	32.6	22.7	21.1	113.3	1978[2]	28.2	31.2	27.3	30.0	116.6
1972	25.3	27.7	22.2	26.6	101.8	1979[2]	33.5	31.3	26.5	28.2	117.4
1973	28.4	29.6	23.7	19.3	101.1	1980[2]	33.6	33.9	22.2		
1974	23.6	22.7	17.6	17.1	81.0	1981					

[1] Woolen and worsted woven goods, except woven felts. [2] Preliminary. *Source: Bureau of Census*

United States Imports[1] of Unmanufactured Wool (Clean Yield) In Millions of Pounds

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1968	24.0	23.5	21.7	22.8	21.2	19.0	25.3	19.2	20.6	17.7	16.4	18.1	249.3
1969	10.9	9.2	19.9	22.0	19.2	14.7	15.9	23.7	12.3	7.5	17.5	16.4	189.2
1970	12.9	15.7	18.0	12.3	11.3	17.0	13.7	14.7	11.2	8.4	6.9	10.9	153.1
1971	12.0	9.4	11.2	11.1	11.5	10.4	13.8	17.0	13.3	5.3	1.0	10.7	126.6
1972	7.1	10.5	7.2	11.8	8.6	6.3	9.9	10.7	6.2	5.8	6.7	5.7	96.6
1973	7.7	7.2	5.7	5.6	6.4	6.8	5.4	4.7	2.5	2.8	2.0	1.9	57.9
1974	1.6	3.0	2.5	2.5	3.1	3.2	2.4	2.9	1.8	1.7	1.0	1.3	26.9
1975	2.2	1.4	1.7	2.1	2.2	2.9	2.4	2.4	2.9	4.9	4.0	4.4	33.6
1976	5.8	5.3	5.6	5.9	4.7	3.9	4.8	5.7	4.6	4.0	3.3	4.4	58.0
1977	5.2	5.0	4.7	5.1	7.4	7.4	4.0	4.7	2.4	2.2	1.8	3.0	53.0
1978	3.7	3.2	4.1	4.9	4.0	3.8	4.7	5.4	3.4	4.0	4.8	4.0	50.4
1979	4.5	3.4	4.2	3.9	4.3	3.1	4.1	3.3	2.6	2.0	3.5	3.5	42.3
1980	6.1	4.9	5.1	4.6	5.7	4.5	5.3	4.8	4.1	3.9	3.6	4.0	56.5
1981													

[1] Data are imports for consumption. *Source: Department of Commerce*

Price Received by Farmers for Shorn[2] Wool in the U.S. In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average[1]
1968	36.5	34.8	38.0	41.6	41.7	41.9	40.7	39.4	39.9	37.8	39.2	38.0	40.5
1969	37.4	38.2	40.4	42.8	43.5	42.8	41.4	39.9	39.2	39.6	38.6	38.6	41.8
1970	35.6	35.7	36.5	37.5	36.6	37.5	37.1	34.2	31.6	32.5	31.7	28.2	35.5
1971	25.3	24.6	23.3	22.9	21.2	21.3	18.7	17.9	18.9	17.0	17.9	16.8	19.4
1972	17.7	19.6	24.2	29.1	34.5	39.4	39.2	38.4	35.8	50.9	52.5	49.3	35.0
1973	78.0	77.3	90.4	86.1	82.3	84.5	83.0	78.8	83.7	74.3	70.1	70.6	82.7
1974	78.4	70.0	66.1	62.5	60.6	59.7	61.1	52.5	48.7	49.6	45.8	43.5	59.1
1975	40.9	33.7	36.7	43.6	48.0	46.7	48.0	46.2	44.8	52.8	47.4	43.3	44.7
1976	50.7	58.4	59.5	64.4	65.1	68.1	68.3	67.0	68.2	70.8	71.2	69.5	65.7
1977	72.9	72.5	72.4	72.5	71.9	73.7	72.3	70.4	66.4	71.3	70.6	69.3	72.0
1978	72.6	68.9	71.2	73.7	73.9	76.2	74.8	74.6	72.7	77.1	81.2	73.6	74.5
1979	78.7	77.3	79.5	86.9	88.0	89.4	87.7	81.8	84.9	87.5	89.0	86.5	86.3
1980[3]	83.6	82.3	91.6	92.2	88.2	90.8	90.3	88.1	93.1	94.5	92.4	86.6	88.1
1981[3]	90.6	92.8	93.1	99.7									
1982													

[1] Weighted average. [2] Grease basis. [3] Preliminary. *Source: Crop Reporting Board, U.S.D.A.*

Salient Statistics of Wool in the United States

						Pulled Wool Production			Apparel Wool (Clean Content)					Mill Consumption	
Year	Sheep & Lambs Shorn[2] Ths.	Weight per Fleece Lbs.	Shorn Wool Production Ths. Lbs.	Price per Lb.	Value of Production Mil. $	Avg. Weight per Skin Lbs.	Total	Total Wool Production	Domestic Prod.	Exports Domestic Wool	Imports for Consumption[4]	Total New Supply[3]	Carpet Wool Imports for Cons.	Apparel	Carpet
							Thousand Pounds								
1968	20,759	8.55	177,396	40.5	71.8	3.43	20,500	197,896	99,563	543	129,717	228,737	119,599	238,290	91,407
1969	19,584	8.46	165,749	41.8	69.5	3.46	17,100	182,849	91,528	196	93,523	184,855	95,664	219,035	83,758
1970	19,163	8.43	161,587	35.4	57.2	3.40	15,200	176,787	88,158	200	79,810	167,768	73,325	163,652	76,609
1971	19,036	8.41	160,156	19.6	31.4	3.46	12,000	172,156	85,143	6,318	42,682	121,507	83,893	116,310	75,151
1972	18,770	8.44	158,506	35.0	55.5	3.40	9,700	168,206	90,762	11,224	24,790	104,328	71,849	142,233	76,368
1973	17,425	8.25	143,738	82.7	118.8	3.49	8,000	151,738	81,726	3,726	19,587	97,587	40,524	109,872	41,394
1974	15,956	8.23	131,382	59.2	77.8	3.31	5,700	137,082	73,525	4,271	11,800	81,054	15,148	74,856	18,595
1975	14,403	8.30	119,535	44.7	53.5	3.35	5,300	124,835	66,978	1,674	16,572	75,876	17,021	94,117	15,908
1976	13,669	8.11	110,817	65.7	73.1	3.34	4,000	114,817	61,427	1,130	38,387	98,684	19,076	106,629	15,117
1977	13,270	8.11	107,159	72.0	77.1	3.30	1,700	108,859	57,819	385	34,175	91,609	18,780	95,485	12,526
1978[1]	12,609	8.08	101,874	74.5	75.9	3.15	1,000	102,874	54,190	425	27,000	80,765	23,404	102,246	13,009
1979[1]	13,068	8.02	104,860	86.3	90.5	3.1	900	105,760	54,470	313	20,283	77,440	22,046	106,533	10,513
1980[1]	13,249	7.96	105,452	88.1	92.9		1,050	106,502						113,499	9,131
1981															

[1] Preliminary. [2] Includes sheep shorn at commercial feeding yards. [3] Production minus exports plus imports; stocks not taken into consideration. [4] Apparel wool includes all dutiable wool; carpet wool includes all duty-free wool.
Source: Economics Service, U.S.D.A.; Dept. of Commerce

Consumption of Apparel Wool in the United States (Clean Basis) In Millions of Pounds (Clean Basis)

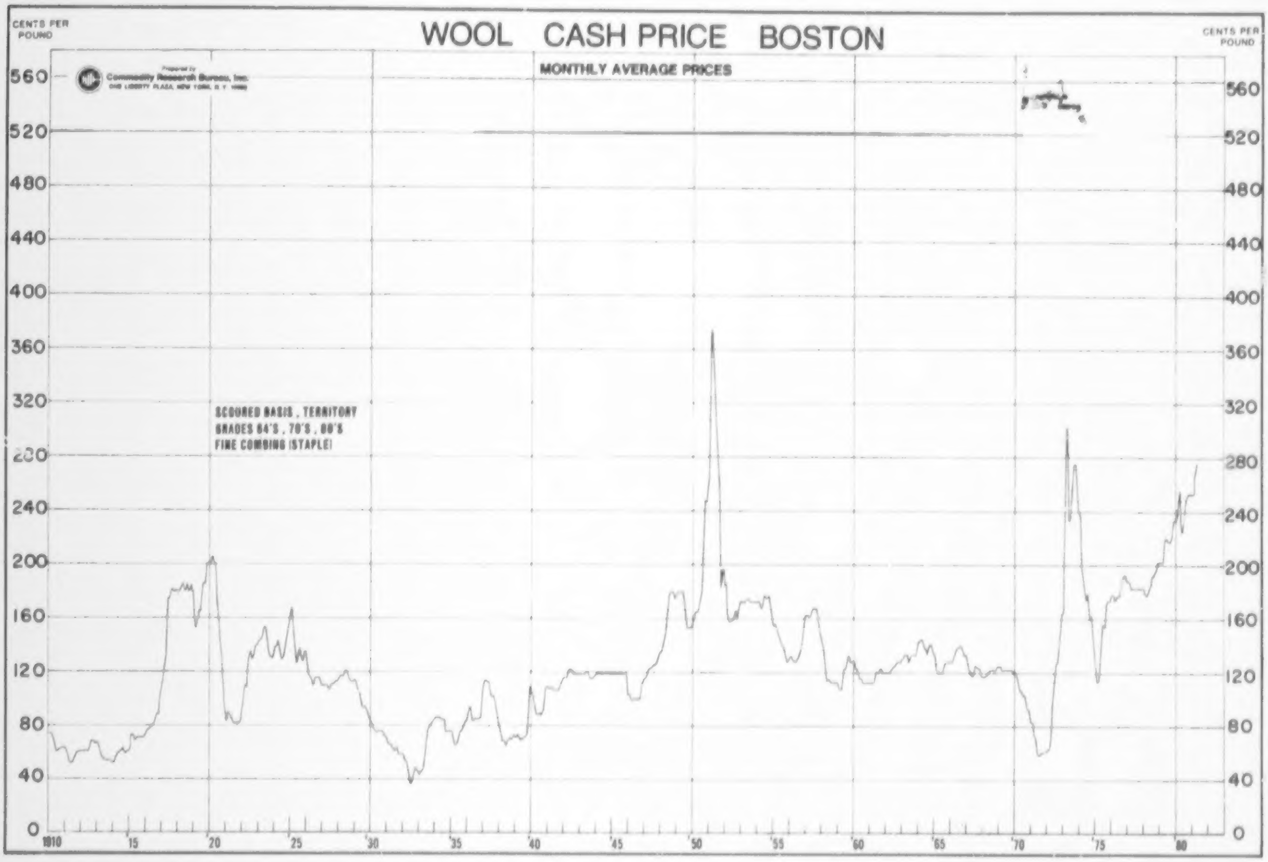
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1968	22.7	19.7	19.4	24.9	19.3	19.8	19.9	19.0	17.8	22.5	17.0	16.3	238.3
1969	22.9	17.1	18.2	23.5	18.9	18.2	18.8	16.9	14.2	19.5	14.7	16.1	219.0
1970	16.0	15.6	18.8	15.6	14.1	16.3	9.8	10.8	13.3	10.7	10.8	12.0	163.7
1971	10.2	9.5	13.0	9.4	9.7	12.1	7.3	8.0	10.7	8.8	7.7	9.8	116.2
1972	9.5	10.4	14.6	11.8	12.6	15.5	9.0	12.6	13.6	10.9	12.5	9.2	142.2
1973	12.6	9.9	9.6	10.9	9.8	9.4	8.5	8.4	7.7	10.0	6.8	6.2	109.9
1974	7.8	6.3	6.4	7.2	6.6	6.5	5.5	6.1	5.6	6.9	5.5	4.6	74.9
1975[1]	6.5	5.8	6.5	8.4	7.7	7.6	8.1	8.1	8.2	10.3	7.8	9.3	94.1
1976[1]	8.9	8.7	12.0	9.1	8.8	11.1	7.3	7.6	9.3	7.9	6.9	9.0	106.7
1977[1]	8.2	8.3	10.0	7.9	7.7	9.5	5.2	7.4	8.6	7.7	7.0	7.9	95.5
1978[1]	7.7	8.2	10.5	8.8	9.2	10.3	7.0	8.4	9.4	8.1	8.1	7.8	102.2
1979[1]	10.1	8.2	8.9	10.0	8.5	7.8	7.5	7.6	6.7	9.9	8.5	8.4	106.5
1980[1]	11.3	10.2	9.8	11.4	9.2	8.3	7.5	8.4	7.7	10.9	9.0	10.1	113.5
1981													

[1] Preliminary. *Source: Bureau of the Census*

Average Wool Prices[1]—Australian—64's, Type 62, Duty Paid—U.S. Mills In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1975			209.0	211.2	219.6	209.0	206.8	204.3	198.5	197.3	206.0	205.0	205.8
1976	205.5	206.0	—	—	212.4	213.5	213.5	216.5	224.2	232.5	224.0	227.3	217.5
1977	229.0	227.3	227.6	228.3	228.0	226.3	227.0	224.0	227.0	227.0	230.5	226.5	227.4
1978	228	230	231	232	233	236	236	236	236	236	237	237	234
1979	237	249	265	273	278	282	283	283	293	309	290	280	277
1980	292	310	306	299	310	321	311	306	311	306	320	321	309
1981	309												
1982													

[1] Raw, clean basis. *Source: U.S. Dept. of Agriculture*



Average Wool Prices—Domestic[1]—Graded Territory, 64's, Staple 2¾″ & Up—U.S. Mills —¢ Lb.

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1968	116.5	116.5	117.8	119.0	120.8	122.0	122.0	122.0	121.0	121.5	124.5	124.5	120.7
1969	124.5	123.9	122.0	122.0	122.0	122.0	122.0	122.0	122.0	121.8	121.0	119.5	122.1
1970	118.5	118.5	111.0	108.1	107.0	105.5	102.5	102.5	95.3	92.5	92.5	85.0	102.4
1971	82.5	82.5	75.7	70.8	63.0	59.7	59.0	59.5	61.0	61.0	60.5	61.5	66.4
1972	62.5	64.0	70.8	94.4	113.0	120.0	127.0	127.5	135.0	145.5	163.5	165.0	115.7
1973	188.0	232.5	302.5	233.8	233.5	257.5	260.0	275.0	275.0	263.0	241.9	237.5	250.0
1974	236.0	222.5	197.5	185.0	174.0	178.8	166.5	161.2	162.5	156.5	141.2	130.8	176.0
1975	116.2	112.5	113.8	134.0	150.6	155.6	153.8	171.2	172.5	172.5	172.5	177.5	150.2
1976	177.5	177.5	173.5	176.2	177.5	177.5	182.5	182.5	187.5	192.5	192.5	187.5	182.1
1977	187.5	187.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.5	182.0	183.3
1978	182	178	178	181	184	192	192	192	195	197	202	202	190
1979	202	202	206	220	220	218	218	218	220	230	233	233	218
1980	238	253	256	231	225	233	245	251	253	253	253	253	245
1981	253												

[1] Raw, shorn, clean basis. *Source: U.S. Dept. of Agriculture*

Zinc

U.S. primary production of zinc in 1980 was about 350,000 tons of metal, compared with 472,481 tons in 1979. Some producers cited the worldwide shortages of zinc concentrates which served to curtail production. New Jersey Zinc closed its 109,000-ton-per-year smelter in Pennsylvania at the end of 1980, but planned to continue production of zinc oxide. St. Joe, which had closed its Monaca, Pa. smelter in December 1979, began production of zinc oxide in late 1980 at the site, and intended to begin metal production for sale in January 1981. Production was scheduled at 45,000 tons of zinc equivalent per year. The company decided not to proceed with construction of a new plant to replace the Monaca facility.

Secondary slab zinc production was about 20,000 tons compared with 53,212 tons in 1979. Production of zinc dust from secondary materials was 25,000 tons compared with 34,141 tons in 1979.

Reported consumption of slab zinc was about 840,000 tons, down 16 percent from that of 1979. Consumption for brass and bronze declined 28 percent, zinc-base alloy declined 20 percent, and galvanizing declined 13 percent, compared with consumption in 1979. Consumption for rolled zinc, zinc oxide, and other uses remained about the same as that in 1979. Reduced activity in the automotive and construction sectors of the economy led to the declines.

Producer and consumer stocks declined about two-thirds during 1980 to about 100,000 tons at yearend. Merchant stocks of zinc, which were 63,637 tons on January 1 dropped to about 30,000 tons by the end of the year.

On May 1, 1980, the Federal Emergency Management Agency increased the stockpile goal for zinc from 1.191 million tons to 1.293 million tons. Total inventory at the end of the year was about 341,000 tons.

During the first half of 1980, the price of zinc was increased by 2 cents per pound, but then reduced in several stages by 4 cents per pound to 35.5 cents per pound for Prime Western grade zinc. In August, producers changed the pricing system from one based on Prime Western grade to a system based on High Grade zinc to reflect the premium for Prime Western from electrolytic plants. By December prices were 41.25 cents per pound for High Grade zinc, 41.5 to 41.75 cents for Prime Western, Controlled Lead grade and Special High Grade, and 41.75 to 42 cents for Continuous Galvanizing Grade. The average price for the year was 37.4 cents per pound. The European Producer Price changed several times but ended the year at 37.4 cents, up 2 cents over that of yearend 1979. Prices on the London Metal Exchange fell to under 30 cents per pound by June, but by the end of the year had recovered to about 37 cents per pound.

Imports for consumption of zinc in ore and concentrate were 135,000 tons, up from 87,000 tons in 1979. Canada, Mexico, and Peru supplied about 90 percent of the total. The duty on zinc concentrates was suspended until June 30, 1981, retroactive to June 30, 1978. Imports for consumption of zinc metal were 385,000 tons, down from 524,000 tons in 1979, as demand for metal slackened. Canada supplied about two-thirds of the total, with Mexico and Australia, the next two largest suppliers, together accounting for about one-eighth of the total.

Salient Statistics of Zinc in the United States In Thousands of Metric[7] Tons

		Production of Slab Zinc						Dec. 31 Stocks at			Consumption					
		Primary											Base Scrap[2]			
Year	Net Import Reliance as a % of Apparent Consumption	Domestic	Foreign	Total	Value Mil. $[6]	Redistilled Secondary	Total Production	Producer Plants	Consumer Plants	Gov't. Stockpile	Zinc Slab	Ores[2]	Zinc[3]	Copper	Aluminum[4]	Total
1968		499.5	521.4	1,020.9	143	79.9	1,101.0	65.4	101.8	167.2	1,350.7	124.1	101.3	162.9	6.4	1,745
1969		458.8	581.8	1,040.6	162	70.6	1,111.0	65.8	102.0	167.8	1,385.4	126.7	100.6	194.4	7.1	1,814
1970		404.0	473.9	877.8	164	77.2	955.0	124.2	92.7	216.9	1,187.0	124.8	93.5	160.0	6.4	1,572
1971		403.8	362.7	766.4	162	80.9	847.0	48.6	91.5	140.1	1,254.1	119.3	104.0	166.5	6.9	1,651
1972		401.0	232.2	633.2	170	73.7	707.0	30.1	125.0	949.6	1,418.3	118.3	93.0	191.3	7.9	1,844
1973	64	399.1	184.4	583.5	198	83.2	667.0	25.9	114.3	677.0	1,503.9	129.7	90.5	192.0	7.6	1,932
1974	59	347.0	208.2	555.2	359	78.5	634.0	39.7	211.2	391.6	1,287.7	127.1	87.7	162.5	8.0	1,673
1975[7]	61	279.4	118.0	397.4	366	52.5	449.9	67.7	97.3	349.9	839.4	75.1	177.8	106.3	.5	1,117
1976	59	346.4	106.1	452.6	359	62.2	514.7	88.0	109.9	349.4	1,028.9	91.8	138.4	139.2	.5	1,394
1977	57	322.2	86.2	408.4	309	45.9	454.3	83.8	86.5	347.8	999.5	86.5	139.6	139.6	.6	1,368
1978	66	267.4	139.3	406.7	207	34.8	441.5	37.9	99.3	345.9	1,050.6	90.0	73.2	141.5	.5	1,442
1979[1]	63	255.3	217.1	472.5	220	53.2	525.7	59.1	93.3	345.7	1,000.6	79.7	146.7	166.4	.9	1,394
1980[5]	58			330.0			325.3	27.2	58.4		817.0	67.6	69.9	165.0	1.2	1,121
1981																

[1] Preliminary. [2] Recoverable zinc content. [3] Excludes redistilled slab & zinc produced by remelting. [4] Aluminum & magnesium-base scrap. [5] Estimate. [6] Domestic ores (recoverable content). [7] Data prior to 1975 are in THOUSANDS OF SHORT TONS. *Source: Bureau of Mines*

ZINC

World Smelter Production of Zinc In Thousands of Metric[4] Tons

Year	Australia	Belgium	Canada	France	W. Germany	Italy	Japan	Mexico	Norway	Peru	Poland	Spain	U.S.S.R.	Un. Kingdom[3]	United States	World Total
1968	226.0	276.8	426.9	228.6	159.1	123.8	667.5	88.2	66.3	72.5	223.2		634.0	157.5	1,021	5,101
1969	267.2	283.5	466.4	279.5	162.2	143.7	785.1	88.5	64.8	68.6	228.7		672.0	166.4	1,041	5,482
1970	287.3	265.9	460.7	246.6	114.3	156.6	745.4	88.9	68.0	75.7	230.4		672.0	161.6	877.8	5,321
1971	285.2	234.5	410.0	241.0	121.7	153.1	789.7	85.8	69.0	63.0	242.5	94.4	717.0	128.4	766.4	5,229
1972	325.2	286.3	524.9	288.3	235.5	171.8	887.7	92.4	80.9	74.0	251.3	109.9	717.0	81.4	633.2	5,656
1973	330.1	309.8	587.0	285.9	283.3	200.6	929.2	78.7	89.2	76.8	259.0	118.0	740.0	92.4	583.5	5,877
1974	305.2	318.3	469.9	305.0	441.0	216.5	936.9	150.9	79.8	78.7	257.0	143.3	750.0	93.0	555.2	6,183
1975	213.1	235.0	470.6	164.9	302.4	198.1	769.7	169.7	67.1	69.7	267.9	147.0	760.0	58.9	438.1	5,526
1976[4]	249.2	241.2	472.3	233.3	304.8	191.2	776.0	175.2	64.4	54.7	237.0	161.1	800.0	41.6	514.7	5,612
1977	256.4	258.2	494.9	238.3	354.8	169.4	805.0	174.4	68.9	66.9	228.0	156.6	815.0	81.5	454.3	5,751
1978[1]	294.8	240.5	495.4	231.2	306.8	177.6	792.7	173.1	71.6	68.4	222.0	163.3	850.0	73.6	441.5	5,820
1979[2]	310.1	260.4	580.4	249.0	355.5	202.8	814.4	160.0	77.5	69.0	217.0	179.7	850.0	76.7	525.7	6,233
1980[2]	300.0		550.0					165.0		72.0					325.3	6,300
1981																

[1] Preliminary. [2] Estimated. [3] Some secondary metal included. [4] Data prior to 1976 are in THOUSANDS OF SHORT TONS. *Source: Bureau of Mines*

U.S. Mine Production of Recoverable Zinc In Thousands of Metric[4] Tons

Year	Arizona	Colorado	Idaho	Illinois	Missouri	Montana	Pennsylvania	New Mexico	New York	New Jersey	Tennessee	Utah	Virginia	Washington	Wisconsin	Total U.S.
1968	5.4	50.3	57.2	18.2	12.3	3.8	30.4	18.7	66.2	25.7	124.0	33.2	19.3	13.9	25.7	529.4
1969	9.0	53.7	55.9	13.8	41.1	6.1	33.0	24.3	58.7	25.1	124.5	34.9	18.7	9.7	22.9	553.1
1970	9.6	56.7	41.1	16.8	50.7	1.5	29.6	16.6	58.6	28.7	118.3	34.7	18.1	12.0	20.6	534.1
1971	7.8	61.2	45.1	12.7	48.2	.4	27.4	14.0	63.4	30.0	119.3	25.7	16.8	5.8	10.6	502.5
1972	10.1	63.8	38.6	11.4	61.9	—	18.3	12.7	60.7	38.1	101.7	21.9	16.8	6.5	6.9	478.3
1973	8.4	58.3	46.1	5.3	82.4	.1	18.9	12.3	81.4	38.0	64.2	16.8	16.7	6.4	8.7	478.9
1974	9.7	49.5	39.5	4.1	92.0	.1	20.3	13.8	93.1	32.8	85.7	12.6	17.2	6.9	8.7	499.9
1975[3]	7.9	44.0	37.1	N.A.	67.9	.1	19.1	10.0	69.5	28.2	75.6	17.8	13.7	N.A.	N.A.	425.8
1976	8.6	45.9	42.3	N.A.	75.8	.1	20.2	N.A.	66.8	30.6	74.9	20.4	10.2	N.A.	N.A.	439.5
1977	4.0	36.5	28.1	N.A.	74.1	.1	20.7	N.A.	64.3	30.4	82.0	16.1	12.0	5.1	N.A.	407.9
1978	N.A.	22.2	32.4	N.A.	59.0	.1	19.1	N.A.	26.5	28.9	87.9	3.5	11.0	N.A.	N.A.	302.7
1979[1]	N.A.	9.9	29.7	N.A.	61.7	.1	21.4	N.A.	12.1	31.1	85.1	N.A.	11.4	—	N.A.	267.3
1980[2]		13.4	28.0		62.1	.1	23.1			28.8	111.4		11.0			313.0
1981																

[1] Preliminary. [2] Estimated. [3] Data prior to 1975 are in THOUSANDS OF SHORT TONS. *Source: Bureau of Mines*

Consumption of Slab Zinc in the United States, by Industries and Grades In Thousands of Metric[4] Tons

		By Industries							By Grades					
Year	Total	Galvanizers	Brass Products	Zinc-Base Alloy[2]	Rolled Zinc	Oxide Zinc	Light-Metal Alloys	Other	Special High Grade	High Grade	Intermediate	Brass Special	Prime Western	Remelt
1968	1,350.7	498.8	161.9	562.9	48.9	34.9	— 43.2 —		683.3	122.5	8.0	135.6	379.0	5.3
1969	1,385.4	493.4	179.5	576.4	48.7	41.4	— 46.0 —		691.0	137.8	7.6	128.2	398.1	5.6
1970	1,187.0	474.2	127.7	463.6	41.1	43.8	— 36.4 —		647.6	126.0	10.0	92.5	309.9	.9
1971	1,254.1	474.8	150.5	516.1	38.9	40.0	— 33.8 —		683.7	133.1	10.0	102.5	328.0	1.8
1972	1,418.3	518.2	192.1	579.8	45.2	52.0	— 31.0 —		684.7	147.1	19.0	129.9	397.2	.7
1973	1,503.9	563.8	197.7	598.7	40.8	61.7	— 2.93 —		739.4	167.5	37.4	132.1	426.6	.9
1974	1,287.7	523.3	181.6	440.3	39.4	65.4	— 37.8 —		572.9	153.1	26.3	122.1	412.1	1.2
1975[4]	839.4	341.9	104.6	303.2	24.8	35.4	5.3	24.3	397.5	75.7	12.9	71.8	280.9	.7
1976	1,028.9	392.9	150.8	387.4	27.1	35.4	5.2	30.1	500.1	101.1	21.0	94.8	310.7	1.2
1977	999.5	396.4	128.3	367.1	27.4	38.5	5.6	36.1	492.6	91.0	19.7	101.2	293.7	1.2
1978	1,050.6	454.0	141.5	354.1	24.9	37.2	11.0	27.8	491.3	109.7	21.8	98.4	327.7	1.7
1979[3]	1,000.6	452.8	141.4	314.1	22.0	35.5	12.9	21.9	443.1	108.6	22.5	86.8	336.8	2.8
1980[1]	817.0	345.1	96.4	208.3	21.1	29.9	— 25.1 —							
1981														

[1] Estimated. [2] Die Casters. [3] Preliminary. [4] Data prior to 1975 are in THOUSANDS OF SHORT TONS. *Source: Bureau of Mines*

Zinc Foreign Trade of the United States In Metric[4] Tons

Year	Imported for Consumption							Zinc Ore & Manufactures Exported						
								Blocks, Pigs, Anodes, etc.		Wrought & Alloys				
	Ores[1]	Blocks, Pigs, Slabs	Zinc Fume	Waste & Scrap	Dross, & Skimmings	Dust, Powder & Flakes	Total Value Thous. $	Unwrought	Unwrought Alloys	Sheets, Plates & Strips	Angels, Bars, Rods, etc.	Waste & Scrap	Dust (Blue Powder)	Zinc Ore & Concentrates
1971	467,368	324,751	N.A.	1,114	853	8,184	159,779	N.A.	13,346	1,686	N.A.	N.A.	N.A.	
1972	174,063	516,643	3,139	814	1,936	9,199	206,191	2,183	4,324	2,419	3,869	1,105	341	
1973	154,174	590,751	17,953	1,544	2,328	4,873	304,871	10,574	14,566	2,480	4,503	6,366	666	
1974	133,733	543,806	18,235	2,418	3,863	9,131	479,357	18,865	19,062	3,487	9,591	10,936	1,152	
1975	428,544	374,922	33,327	1,418	3,158	5,739	399,857	2,730	6,897	1,628	11,466	4,448	603	
1976	155,803	695,131	6,927	1,803	12,445	6,009	546,239	1,593	3,513	2,271	7,727	8,171	774	
1977[4]	109,277	503,621	233	9,188	11,739	6,702	411,414	215	899	2,432	4,677	7,445	928	N.A.
1978	106,315	622,470	60	3,310	7,436	8,978	434,376	723	554	2,262	860	14,986	1,803	10,973
1979[2]	87,499	524,130	28	3,259	4,454	3,586	434,677	279	366	1,824	1,451	28,149	966	20,095
1980[3]	135,000	385,000						15				40,000		3,252

[1] Zinc content. [2] Preliminary. [3] Estimate. [4] Data prior to 1977 are in SHORT TONS. *Source: Bureau of Mines*

Smelter Production of Slab Zinc[1] in the United States (Includes GSA Metal) In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1972	68.0	61.8	66.6	62.9	68.8	69.3	63.4	62.1	58.4	64.1	63.1	57.0	765.4
1973	61.8	56.1	63.1	60.5	59.6	52.6	55.1	55.3	56.9	57.0	54.6	55.3	687.9
1974	50.4	48.8	52.1	47.7	51.5	48.4	49.2	44.7	46.2	49.9	51.5	49.8	590.2
1975	52.1	45.0	45.1	42.7	34.1	29.7	26.9	28.0	32.2	33.5	35.7	40.9	445.9
1976	45.8	45.3	47.2	46.5	47.5	45.3	45.0	39.9	40.6	46.6	41.2	45.1	536.0
1977	45.6	39.6	43.6	42.9	37.2	31.9	26.8	25.4	26.0	34.2	40.0	40.9	434.1
1978	39.2	33.0	30.4	33.5	35.7	34.5	34.5	37.6	37.3	44.2	42.4	42.6	444.8
1979	45.7	46.1	52.9	51.1	49.9	43.0	44.0	42.0	39.8	46.0	43.4	33.5	537.4
1980	30.5	30.6	34.8	32.1	31.9	28.5	20.8	26.7	28.6	31.0	29.9	33.2	358.6
1981	33.4	31.5	34.5	34.1									

[1] Smelter & refinery production from domestic & foreign ores. *Source: American Bureau of Metal Statistics, Inc.*

Domestic Shipments of Slab Zinc[1] in the United States In Thousands of Short Tons

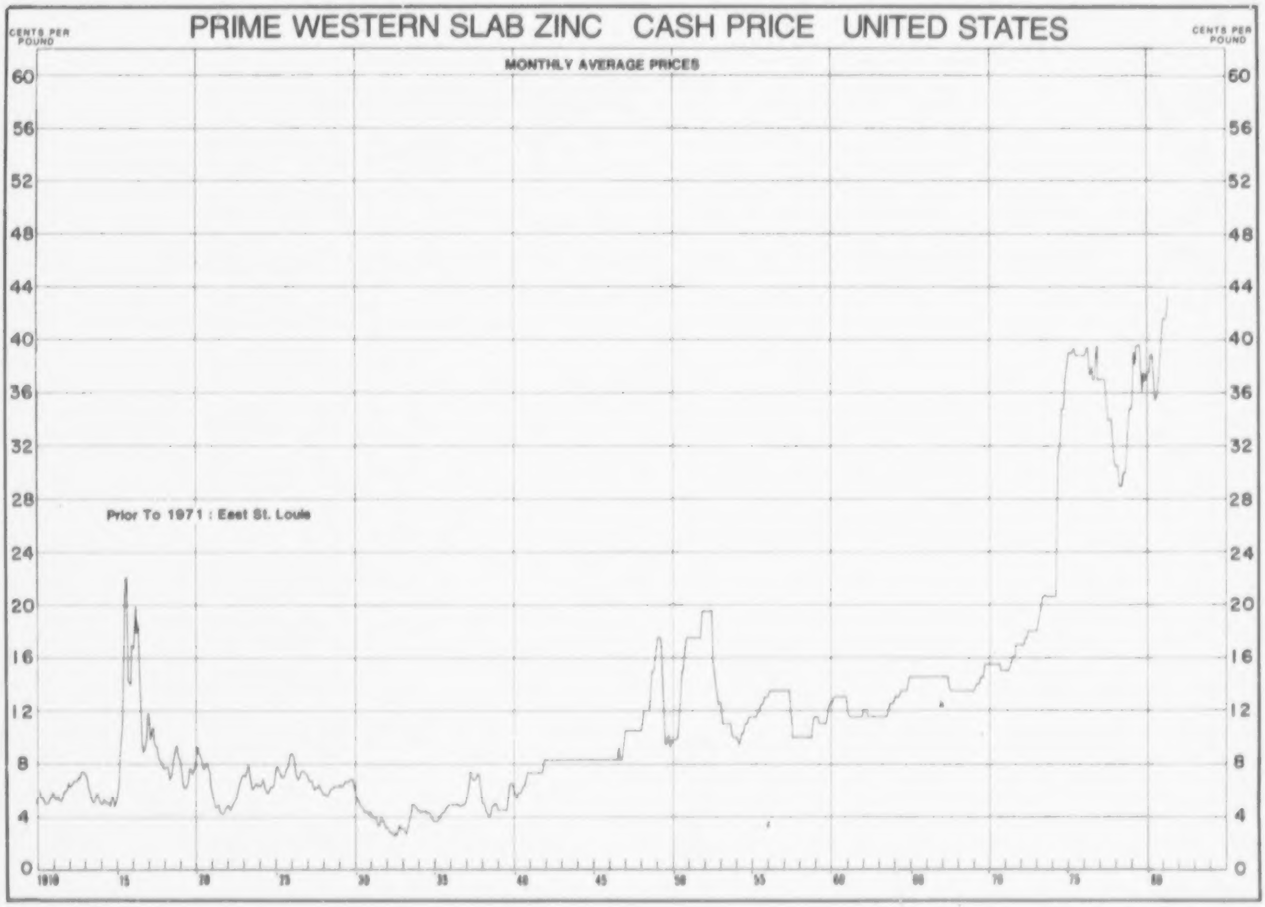
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1972	67.1	73.5	74.0	68.0	75.5	74.4	63.2	71.4	56.6	65.7	65.0	60.2	814.6
1973	63.6	62.5	67.0	64.8	65.2	58.3	59.2	59.8	55.6	57.8	59.1	53.7	726.5
1974	50.1	57.7	58.3	60.2	63.1	54.0	56.8	55.6	52.0	52.7	45.1	38.3	643.9
1975	30.8	23.6	23.1	35.2	33.8	37.1	44.9	45.0	44.8	40.4	29.0	34.2	421.7
1976	39.8	44.1	54.3	46.0	47.9	43.6	41.2	48.3	46.1	33.0	31.2	39.0	514.6
1977	44.0	45.9	68.9	33.8	26.2	33.5	29.2	35.6	31.0	33.5	35.0	40.4	457.1
1978	40.7	34.5	36.3	40.3	44.8	42.9	35.1	42.0	34.7	47.3	36.4	37.1	472.2
1979	44.2	47.9	53.5	44.1	47.7	44.5	37.4	35.7	40.3	47.3	33.7	37.9	514.3
1980	44.5	44.2	36.8	32.7	26.4	22.6	21.5	33.4	34.0	37.6	32.7	33.3	399.6
1981	35.6	31.1	32.3	37.4									

[1] Does not include export shipments & Gov't. account shipments. *Source: American Bureau of Metal Statistics, Inc.*

Stocks of Slab Zinc[1] (at Smelter) in the United States, at End of Month In Thousands of Short Tons

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1972	50.5	37.8	29.4	23.4	21.2	21.3	26.7	23.5	28.0	31.2	32.3	31.8
1973	32.7	31.3	30.4	28.1	24.6	22.2	25.1	27.4	32.3	31.6	29.7	29.3
1974	29.8	25.1	22.9	18.8	17.6	19.1	19.6	18.1	20.3	22.3	30.9	42.9
1975	64.4	86.0	108.0	115.7	116.0	108.6	90.5	73.5	61.0	54.0	60.7	67.4
1976	73.4	74.6	67.5	68.0	67.6	69.3	73.0	64.6	59.1	72.6	82.7	88.8
1977	90.5	84.2	58.9	67.9	78.9	77.3	74.9	64.7	59.7	60.3	65.3	65.8
1978	64.3	62.8	56.9	50.0	40.9	32.5	31.8	27.4	30.1	26.9	32.9	38.4
1979	39.9	38.0	37.5	44.5	46.7	45.1	51.8	58.1	57.5	56.3	66.0	61.5
1980	47.5	34.0	31.9	31.4	36.9	42.8	42.1	35.4	30.1	23.4	20.6	20.6
1981	18.4	18.8	20.9	17.6								

[1] Figures include zinc produced from foreign ores as well as domestic ores. *Source: American Bureau of Metal Statistics, Inc.*


PRIME WESTERN SLAB ZINC CASH PRICE UNITED STATES

Average Price of Zinc, Prime Western Slab (Delivered U.S. Basis[1]) In Cents per Pound

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1968	13.50	13.50	13.50	13.50	13.50	13.50	13.50	13.50	13.50	13.50	13.50	13.50	13.50
1969	13.84	14.00	14.00	14.02	14.50	14.50	14.50	14.50	15.38	15.50	15.50	15.50	14.65
1970	15.50	15.50	15.50	15.50	15.50	15.50	15.50	15.33	15.00	15.00	15.00	15.00	15.32
1971[1]	15.00	15.00	15.16	15.50	15.81	16.00	16.21	17.00	17.00	17.00	17.00	17.00	16.14
1972	17.00	17.00	17.26	17.50	17.89	18.00	18.00	18.00	18.00	18.00	18.00	18.09	17.73
1973	18.58	19.25	19.83	20.46	20.63	20.70	20.63	20.63	20.63	20.63	20.63	27.46	20.84
1974	31.18	31.75	32.70	34.75	34.75	35.25	36.97	38.00	38.95	39.00	39.00	39.00	35.94
1975	39.25	39.07	38.75	38.75	38.75	38.75	38.75	38.75	38.75	39.66	38.75	38.75	38.89
1976	37.26	37.00	37.00	37.00	37.00	37.00	37.00	38.75	39.50	37.00	37.00	37.00	37.38
1977	37.00	37.00	37.00	37.00	35.64	34.00	34.00	34.00	34.00	31.74	30.66	30.50	35.21
1978	30.50	30.26	29.00	29.00	29.00	29.95	30.00	31.92	32.75	33.66	34.75	34.75	31.30
1979	35.00	36.90	38.09	39.50	39.50	39.55	39.63	36.82	36.03	37.50	36.88	37.50	37.74
1980	37.50	38.70	38.92	38.50	37.50	36.55	35.50	35.98	37.46	38.48	39.69	41.63	38.03
1981	41.63	41.63	42.13	43.73									
1982													

[1] Prior to 1971, prices are for delivered E. St. Louis. *Source: American Metal Market*

Miscellaneous

U.S. Net Import Reliance & Major Foreign Sources of Metals and Minerals

U.S. NET IMPORT RELIANCE 1/ OF METALS AND MINERALS AS A PERCENT OF APPARENT CONSUMPTION 2/
(In percent. Based on net imports of metals, minerals, ores, and concentrates.)

Metals and Minerals	1978	1979	1980e/	Major Foreign Sources (1976-1979)
Aluminum (metal)	11	4	E	Canada, Ghane
Antimony	43	53	53	Metal: Mainland China, Bolivia, Mexico Bel.-Lux. Ores: Mexico, Rep. of South Africa, Bolivia, Canada Oxide: Rep. of South Africa, France, United Kingdom, Mainland China
Argon	-	-	-	
Arsenic	W	W	W	Mexico, France, Sweden
Asbestos	85	83	76	Canada, Republic of South Africa
Barium	27	38	38	Peru, Ireland, Mexico, Morocco
Bauxite and alumina	93	93	94	Bauxite: Jamaica, Guinea Alumina: Australia, Jamaica
Beryllium	W	W	W	Brazil, India, Argentina, Rep. of South Africa
Bismuth	W	W	W	Peru, Mexico, Fed. Rep. of Germany, United Kingdom
Boron	E	E	E	Colemanite, crude: Turkey
Bromine	E	E	E	Israel, Netherlands, Fed. Rep. of Germany
Cadmium	63	64	62	Metal: Canada, Australia, Mexico, Bel.-Lux. Flue Dust: Mexico, Canada
Cement	7	11	7	Canada, Japan, Mexico
Cesium	100	100	100	Canada, Fed. Rep. of Germany
Chromium	91	90	91	Chromite: Rep. of South Africa, Philippines, U.S.S.R., Turkey Ferrochromium: Rep. of South Africa, Yugoslavia, Zimbabwe, Japan
Clays	E	E	E	United Kingdom, Canada, Spain, Netherlands
Cobalt	95	94	93	Zaire, Bel.-Lux., Zambia, Finland
Columbium	100	100	100	Brazil, Canada, Thailand
Copper	20	12	14	Canada, Chile, Zambia, Peru
Corundum	100	100	100	Rep. of South Africa, India
Diamond (industrial stones)	100	100	100	Ireland, Rep. of South Africa, Bel.-Lux., United Kingdom
Diamond (bort, powder, dust)	E	E	E	Ireland, Rep. of South Africa, Bel.-Lux., United Kingdom
Diatomite	E	E	E	Fed. Rep. of Germany, Mexico
Feldspar	E	E	E	Sweden, Norway, Canada
Fluorspar	84	86	84	Mexico, Rep. of South Africa, Spain, Italy
Gallium	38	68	70	Switzerland, Fed. Rep. of Germany, Canada
Garnet	-	-	-	
Gem stones	99	99	99	Rep. of South Africa, Bel.-Lux., Israel, United Kingdom, India
Germanium	NA	NA	NA	Fed. Rep. of Germany, Switzerland, Bel.-Lux., U.S.S.R.
Gold	53	50	28	Canada, U.S.S.R., Switzerland
Graphite (natural)	W	W	100	Mexico, Rep. of Korea, Madagascar, U.S.S.R.
Gypsum	32	35	38	Canada, Mexico, Jamaica
Hafnium	W	W	W	Singapore, Mexico
Helium	E	E	E	
Ilmenite	41	39	47	Australia, Canada, Rep. of South Africa
Indium	NA	NA	NA	Peru, Canada, Bel.-Lux., United Kingdom
Iodine	W	W	W	Japan, Chile
Iron ore	29	25	22	Canada, Venezuela, Brazil, Liberia
Iron and steel	12	12	13	Japan, Europe, Canada
Iron and steel scrap	E	E	E	Canada
Kyanite & related minerals	E	E	E	India, Rep. of South Africa, Mexico
Lead	9	4	E	Canada, Peru, Mexico, Honduras, Australia
Lime	3	3	2	Canada, Mexico
Lithium	E	E	E	Brazil, Canada, France, Japan
Magnesium and mag. compds.	E	E	E	Metal: Norway, Netherlands, Canada, Italy Compounds: Ireland, Greece, Japan, India

Source: U.S. Bureau of Mines

U.S. Net Import Reliance & Major Foreign Sources of Metals and Minerals

U.S. NET IMPORT RELIANCE 1/ OF METALS AND MINERALS AS A PERCENT OF APPARENT CONSUMPTION 2/
(In percent. Based on net imports of metal, minerals, ores, and concentrates.)

Metals and Minerals	1978	1979	1980e/	Major Foreign Sources (1976-1979)
Manganese	97	98	97	Manganese Ore: Gabon, Brazil, Australia, Rep. of South Africa Ferromanganese: Rep. of South Africa, France, Japan
Mercury	64	55	49	Spain, Algeria, Italy, Canada, Yugoslavia
Mica (natural) sheet	100	100	100	India, Brazil, Madagascar
Mica (natural) scrap flake	E	E	E	Canada, India, Brazil
Molybdenum	E	E	E	Canada, Chile
Nickel	80	69	73	Canada, Norway, New Caledonia, Dominican Republic
Nitrogen (elemental)	-	-	-	
Nitrogen (fixed)	7	8	7	Canada, U.S.S.R., Trinidad and Tobago, Mexico
Oxygen	-	-	-	
Peat	34	32	32	Canada, Fed. Rep. of Germany
Perlite	-	-	-	
Phosphate rock	E	E	E	Morocco, Netherlands Antilles, Mexico
Platinum-group metals	90	89	87	Rep. of South Africa, U.S.S.R., United Kingdom
Potash	64	66	62	Canada, Israel
Pumice & volcanic cinder	4	1	3	Greece, Italy
Quartz crystal-industrial	NA	NA	NA	Brazil
Radium	NA	NA	NA	NA
Rare-earth metals	W	W	W	Monazite: Australia, Malaysia, Thailand
Rhenium	W	W	W	Fed. Rep. of Germany, Chile
Rubidium	NA	NA	NA	NA
Rutile	W	100	W	Australia, India
Salt	10	10	8	Canada, Mexico, Bahamas
Sand and gravel	E	E	E	Canada
Scandium	100	100	100	NA
Selenium	43	28	40	Canada, Japan, Yugoslavia
Silicon	17	13	21	Norway, Canada, Rep. of South Africa, Yugoslavia
Silver	48	42	E	Canada, Mexico, Peru, United Kingdom
Sodium carbonate	E	E	E	Canada, Fed. Rep. of Germany, Romania
Sodium sulfate	7	9	8	Canada, Belgium, Fed. Rep. of Germany
Stone	-	-	-	Dimension stone: Italy, Canada, Mexico Crushed stone: Canada, Bahamas
Strontium	100	100	100	Mexico
Sulfur	12	11	13	Canada, Mexico
Talc and pyrophyllite	E	E	E	Italy, Canada, France
Tantalum	97	96	97	Thailand, Canada, Malaysia, Brazil
Tellurium	W	W	W	Canada, Peru, Fiji
Thallium	W	W	W	Fed. Rep. of Germany, Bel.-Lux., Japan
Thorium	NA	NA	NA	France, Canada, Netherlands
Tin	79	80	84	Malaysia, Bolivia, Thailand, Indonesia
Titanium (metal)	W	W	W	Japan, U.S.S.R., United Kingdom, China
Tungsten	56	58	54	Canada, Bolivia, Thailand, Rep. of Korea
Uranium	-	-	-	
Vanadium	36	28	15	Rep. of South Africa, Chile, Canada
Vermiculite (crude)	E	E	E	Rep. of South Africa
Yttrium	NA	NA	NA	Monazite: Australia, Malaysia, Thailand Uranium residue: Canada
Zinc	66	63	58	Ore & Concentrates: Canada, Honduras, Peru Metal: Canada, Spain, Mexico, Fed. Rep. of Germany
Zirconium	W	W	W	Australia, Rep. of South Africa

e/ Estimate.
E Net exports.
W Withheld.
NA Not Available.

1/ Net importreliance = imports - exports + adjustments for Government and industry stock changes.
2/ Apparent consumption = U.S. primary + secondary production + net import reliance.

Source: U.S. Bureau of Mines

Conversion Factors

The following equivalents are among those most commonly used in international agricultural trade:

METRIC EQUIVALENTS

1 meter	(m)	equals	39.37	inches
1 hectare	(ha)	equals	2.471	acres
1 liter	(l)	equals	.9081	dry quarts, or
		equals	1.0567	liquid quarts
1 kilogram	(kg)	equals	2.204622	pounds
1 quintal	(100 kgs)	equals	220.462	pounds
1 tonne	(1,000 kgs)	equals	2,204.622	pounds

Bushel weights:
Wheat & soybeans = 60 lbs.
Corn, sorghum & rye = 56 lbs.
Barley (grain) = 48 lbs.: malt = 34 lbs.
Oats = 32 lbs.: Rapeseed = 50 lbs.

Bushels to metric tons:
Wheat & soybeans = bushels × .027216
Barley = bushels × .021772
Corn, sorghum, rye = bushels × .025400
Oats = bushels × .014515

1 metric ton equals:
2204.622 lbs.
22.046 hundredweight
10 quintals

One metric ton (tonne) 1,000 kilograms =
36.7437 bushels wheat or soybeans
39.3679 bushels corn, sorghum, rye, flaxseed
45.9296 bushels barley
68.8944 bushels oats
44.092 rapeseed
22.046 cwt. rice

Area:
1 Acre = .404694 hectares
1 Hectare = 2.4710 acres

Yields:
Wheat = bushels per acre × 0.6725 = quintals per hectare
Rye, corn = bushels per acre × 0.6277 = quintals per hectare
Barley = bushels per acre × 0.5380 = quintals per hectare
Oats = bushels per acre × 0.3587 = quintals per hectare

APPROXIMATE CONVERSIONS FROM CUSTOMARY TO METRIC AND VICE VERSA

	When you know:	*You can find:*	*If you multiply by:*
LENGTH	inches	millimeters	25
	feet	centimeters	30
	yards	meters	0.9
	miles	kilometers	1.6
	millimeters	inches	0.04
	centimeters	inches	0.4
	meters	yards	1.1
	kilometers	miles	0.6
AREA	square inches	square centimeters	6.5
	square feet	square meters	0.09
	square yards	square meters	0.8
	square miles	square kilometers	2.6
	acres	square hectometers (hectares)	0.4
	square centimeters	square inches	0.16
	square meters	square yards	1.2
	square kilometers	square miles	0.4
	square hectometers (hectares)	acres	2.5
MASS	ounces	grams	28
	pounds	kilograms	0.45
	short tons	megagrams (metric tons)	0.9
	grams	ounces	0.035
	kilograms	pounds	2.2
	megagrams (metric tons)	short tons	1.1
LIQUID VOLUME	ounces	milliliters	30
	pints	liters	0.47
	quarts	liters	0.95
	gallons	liters	3.8
	milliliters	ounces	0.034
	liters	pints	2.1
	liters	quarts	1.06
	liters	gallons	0.26
TEMPERATURE	degrees Fahrenheit	degrees Celsius	5/9 (after subtracting 32)
	degrees Celsius	degrees Fahrenheit	9/5 (then add 32)

Source: U.S. Department of Commerce